

SEQUENCE LISTING

<110> Blumwald, Eduardo
Apse, Maris
Snedden, Wayne
Aharon, Gilad

<120> HIGH SALT PLANTS AND USES FOR
BIOREMEDIATION

<130> 529642000221

<150> US 60/078,474

<151> 1998-03-18

<150> US 09/271,584

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<150> US 10/155,535

<151> 2002-05-24

<150> US 60/395,637

<151> 2002-07-12

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<151> 2002-07-12

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<170> FastSEQ for Windows Version 4.0

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<212> PRT

<213> *Arabidopsis thaliana*

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Ser Ile Thr Ala Leu Leu Ile Gly Leu Gly Thr Gly Val Thr Ile Leu
50          55          60
Leu Ile Ser Lys Gly Lys Ser Ser His Leu Leu Val Phe Ser Glu Asp
65          70          75          80
Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe
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Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile Met Leu
100         105         110
Phe Gly Ala Val Gly Thr Ile Ile Ser Cys Thr Ile Ile Ser Leu Gly
115         120         125
Val Thr Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Phe Asp Leu Gly
130         135         140
Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser Val Cys
145         150         155         160
Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu Tyr Ser Leu
165         170         175
Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Val Phe
180         185         190
Asn Ala Ile Gln Ser Phe Asp Leu Thr His Leu Asn His Glu Ala Ala
195         200         205
Phe His Leu Leu Gly Asn Phe Leu Tyr Leu Phe Leu Leu Ser Thr Leu
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Leu Gly Ala Ala Thr Gly Leu Ile Ser Ala Tyr Val Ile Lys Lys Leu
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Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met Met Leu
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 Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr Thr Trp
 275 280 285
 His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His Thr Phe Ala
 290 295 300
 Thr Leu Ser Phe Leu Ala Glu Thr Phe Ile Phe Leu Tyr Val Gly Met
 305 310 315 320
 Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser Asp Thr Pro Gly
 325 330 335
 Thr Ser Ile Ala Val Ser Ser Ile Leu Met Gly Leu Val Met Val Gly
 340 345 350
 Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu Ala Lys
 355 360 365
 Lys Asn Gln Ser Glu Lys Ile Asn Phe Asn Met Gln Val Val Ile Trp
 370 375 380
 Trp Ser Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala Tyr Asn
 385 390 395 400
 Lys Phe Thr Arg Ala Gly His Thr Asp Val Arg Gly Asn Ala Ile Met
 405 410 415
 Ile Thr Ser Thr Ile Thr Val Cys Leu Phe Ser Thr Val Val Phe Gly
 420 425 430
 Met Leu Thr Lys Pro Leu Ile Ser Tyr Leu Leu Pro His Gln Asn Ala
 435 440 445
 Thr Thr Ser Met Leu Ser Asp Asp Asn Thr Pro Lys Ser Ile His Ile
 450 455 460
 Pro Leu Leu Asp Gln Asp Ser Phe Ile Glu Pro Ser Gly Asn His Asn
 465 470 475 480
 Val Pro Arg Pro Asp Ser Ile Arg Gly Phe Leu Thr Arg Pro Thr Arg
 485 490 495
 Thr Val His Tyr Tyr Trp Arg Gln Phe Asp Asp Ser Phe Met Arg Pro
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 <213> Ipomoea nil

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 Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Val
 35 40 45
 Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val
 50 55 60
 Ile Leu Leu Leu Ser Gly Gly Lys Ser Ser His Leu Leu Val Phe Ser
 65 70 75 80
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 <213> Suaeda maritima

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 35 40 45
 Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ser Thr Gly
 50 55 60
 Ile Ile Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val
 65 70 75 80
 Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
 85 90 95
 Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile
 100 105 110
 Thr Ile Ile Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Ile Ile
 115 120 125
 Ile Ser Leu Gly Ser Ile Ala Ile Phe Gln Lys Met Asp Ile Gly Ser
 130 135 140
 Leu Glu Leu Gly Asp Leu Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr
 145 150 155 160
 Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu
 165 170 175
 Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser
 180 185 190
 Val Val Leu Phe Asn Ala Ile Gln Asn Phe Asp Leu Thr His Ile Asp
 195 200 205
 His Arg Ile Ala Phe Gln Phe Gly Gly Asn Phe Leu Tyr Leu Phe Phe
 210 215 220
 Ala Ser Thr Leu Leu Gly Ala Val Thr Gly Leu Leu Ser Ala Tyr Val
 225 230 235 240
 Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala
 245 250 255
 Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe
 260 265 270
 Tyr Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser
 275 280 285
 His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys
 290 295 300
 His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Ile Phe Ile Phe Leu
 305 310 315 320
 Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Ser
 325 330 335
 Asp Ser Pro Gly Thr Ser Val Ala Val Ser Ser Ile Leu Leu Gly Leu
 340 345 350
 His Met Val Gly Arg Ala Ala Phe Val Phe Pro Phe Ala Phe Leu Met
 355 360 365
 Asn Leu Ser Lys Lys Ser Asn Ser Glu Lys Val Thr Phe Asn Gln Gln
 370 375 380
 Ile Val Ile Trp Trp Ala Gly Leu Met Lys Ser Ala Val Ser Val Ala
 385 390 395 400
 Leu Ala Tyr Asn Gln Phe Ser Arg Ser Gly His Thr Gln Leu Arg Gly

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Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys	His	
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Thr	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Ile	Phe	Ile	Phe	Leu	Tyr	
305					310					315					320	
Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Val	Ser	Asp	
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Ser	Pro	Gly	Ile	Ser	Val	Gln	Val	Ser	Ser	Ile	Leu	Leu	Gly	Leu	Val	
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Leu	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	
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Leu	Thr	Lys	Lys	Thr	Pro	Glu	Ala	Lys	Ile	Ser	Phe	Asn	Gln	Gln	Val	
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Thr	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu	
385					390					395					400	
Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Gly	Gly	His	Thr	Gln	Leu	Arg	Ala	Asn	
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Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	Val	
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Val	Phe	Gly	Leu	Met	Thr	Lys	Pro	Leu	Ile	Arg	Ile	Leu	Leu	Pro	Ser	
	435					440					445					
His	Lys	His	Leu	Ser	Arg	Met	Ile	Ser	Ser	Glu	Pro	Thr	Thr	Pro	Lys	
	450					455				460						
Ser	Phe	Ile	Val	Pro	Leu	Asp	Ser	Thr	Gln	Asp	Ser	Glu	Ala	Asp		
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Leu	Glu	Arg	His	Val	Pro	Arg	Pro	His	Ser	Leu	Arg	Met	Leu	Leu	Ser	
			485					490					495			
Thr	Pro	Ser	His	Thr	Val	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asn	Ala	
		500					505					510				
Phe	Met	Arg	Pro	Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Ala	Pro	
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<210> 6

<211> 555

<212> PRT

<213> Torenia hybrida

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Thr	Leu	Leu	Cys	Thr	Cys	Ile	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	
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Arg	Trp	Met	Asn	Glu	Ser	Ile	Ile	Ala	Leu	Ile	Ile	Gly	Leu	Ala	Thr	
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Gly	Val	Ile	Ile	Leu	Leu	Ile	Ser	Gly	Gly	Lys	Ser	Ser	His	Leu	Leu	
65				70				75						80		
Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Ala	Leu	Pro	Pro	Ile	Ile	

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 <213> Ipomoea tricolor

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 35 40 45
 Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val
 50 55 60
 Ile Leu Leu Leu Ser Arg Gly Lys Ser Ser His Leu Leu Val Phe Ser
 65 70 75 80
 Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala
 85 90 95
 Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Val Asn Phe Met Thr Ile
 100 105 110
 Met Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Cys Ser Ile Ile Ser
 115 120 125
 Phe Gly Ala Val Lys Ile Phe Lys His Leu Asp Ile Asp Phe Leu Asp
 130 135 140
 Phe Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser
 145 150 155 160
 Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Leu Leu Tyr
 165 170 175
 Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val
 180 185 190
 Leu Phe Asn Ala Ile Gln Ser Phe Asp Met Thr Ser Phe Asp Pro Lys
 195 200 205
 Ile Gly Leu His Phe Ile Gly Asn Phe Leu Tyr Leu Phe Leu Ser Ser
 210 215 220
 Thr Phe Leu Gly Val Gly Ile Gly Leu Leu Cys Ala Tyr Ile Ile Lys
 225 230 235 240
 Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met
 245 250 255
 Met Leu Met Ser Tyr Leu Ser Tyr Ile Met Ala Glu Leu Phe Tyr Leu
 260 265 270
 Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr
 275 280 285
 Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Arg His Ser
 290 295 300
 Phe Ala Thr Leu Ser Phe Val Ala Glu Thr Phe Ile Phe Leu Tyr Val
 305 310 315 320
 Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Val Lys Asn Ser
 325 330 335
 Gln Gly Leu Ser Val Ala Val Ser Ser Ile Leu Val Gly Leu Ile Leu
 340 345 350
 Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu
 355 360 365
 Ala Lys Lys Asn Ser Ser Asp Lys Ile Ser Phe Arg Gln Gln Ile Ile

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385		390		395
Tyr Asn Lys Phe Thr Thr Ser Gly His Thr Ser Leu His Glu Asn Ala				400
	405		410	415
Ile Met Ile Thr Ser Thr Val Thr Val Val Leu Phe Ser Thr Val Val				
	420		425	430
Phe Gly Leu Met Thr Lys Pro Leu Ile Asn Leu Leu Leu Pro Pro His				
	435		440	445
Lys Gln Ile Ala Ser Gly His Ser Ser Met Thr Thr Ser Glu Pro Ser				
	450		455	460
Ser Pro Lys His Phe Ala Val Pro Leu Leu Asp Asn Gln His Asp Ser				
465		470		475
Glu Ser Asp Met Ile Thr Gly Pro Glu Val Ala Arg Pro Thr Ala Leu				
	485		490	495
Arg Met Leu Leu Arg Thr Pro Thr His Thr Val His Arg Tyr Trp Arg				
	500		505	510
Lys Phe Asp Asp Ser Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe				
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<211> 575

<212> PRT

<213> Arabidopsis thaliana

<400> 8

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Ser Phe Val Leu Gly His Val Leu Arg Arg His Arg Phe His Tyr Leu				
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Pro Glu Ala Ser Gly Ser Leu Leu Ile Gly Leu Ile Val Gly Ile Leu				
	50	55	60	
Ala Asn Ile Ser Asp Thr Glu Thr Ser Ile Arg Phe Cys Pro Pro Pro				
65		70	75	80
Ser Ile Pro Glu Phe Ser Leu Leu Ser Phe Pro Arg Ser Leu Val Cys				
	85	90	95	
Ser Phe Tyr Ser Val Ser Gly Arg Gly Leu Ile Ser Thr Lys Ser Ser				
	100	105	110	
Ser Ser Cys Phe Cys Cys Leu Pro Ser Tyr Tyr Ile Leu Cys Phe Asn				
	115	120	125	
Ile Cys Ile Ser Ser Phe Lys Phe Ala Ala Ala Met Leu Cys Ile Met				
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Asp Val Ile Phe Leu Asp Ile Ile His Leu Phe Glu Pro Ser Gln Val				
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Ser Val Phe Asn Leu Asn His Ser Phe Leu Thr Leu Glu Pro Leu Leu				
	165	170	175	
Pro Leu Leu Ser Ser Glu Leu Leu Ser Leu Gln Leu Leu Leu Val Val				
	180	185	190	
Cys Tyr Leu Gly Gly Ser Met Tyr Leu Met Tyr Lys Leu Pro Phe Val				
	195	200	205	
Glu Cys Leu Met Phe Gly Ala Leu Ile Ser Ala Thr Asp Pro Val Thr				
	210	215	220	

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				245					250					255	
Tyr	Ala	Leu	Val	Phe	Gly	Glu	Ser	Val	Leu	Asn	Asp	Ala	Val	Ser	Phe
			260					265					270		
Tyr	Tyr	Leu	Leu	Arg	Tyr	Trp	Ala	Leu	Pro	Phe	Lys	Thr	Met	Ser	Leu
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Val	Asn	Arg	Gln	Ser	Ser	Ser	Gly	Glu	His	Phe	Phe	Met	Val	Val	Ile
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Arg	Phe	Phe	Glu	Thr	Phe	Ala	Gly	Ser	Met	Ser	Ala	Gly	Leu	Ala	Ile
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Ser	Phe	Leu	Asn	Ser	Phe	Tyr	Thr	Val	Val	Phe	Thr	Leu	Leu	Ile	Leu
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Ser	Glu	His	Ile	Val	Asn	Val	Met	Ser	Leu	Phe	Ser	Leu	Phe	Ser	Thr
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Ser	Ile	His	Ala	Cys	Arg	Arg	Cys	Trp	Ser	Leu	Arg	His	Cys	Phe	Tyr
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Thr	Leu	His	Arg	Asn	Cys	Asn	Arg	Arg	Val	Met	Lys	Arg	Tyr	Thr	Phe
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Ser	Asn	Leu	Ser	Glu	Ala	Ser	Gln	Ser	Phe	Val	Ser	Ser	Phe	Phe	His
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Leu	Ile	Ser	Ser	Leu	Ala	Glu	Thr	Phe	Thr	Phe	Ile	Tyr	Met	Gly	Phe
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Asp	Ile	Ala	Met	Glu	Gln	His	Ser	Trp	Ser	His	Val	Gly	Ala	Val	Asn
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Glu	Gly	His	Gly	Gln	Ile	Ile	Phe	Thr	Ala	Thr	Thr	Thr	Ile	Val	Val
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Leu	Glu	Ala	Leu	Glu	Val	Val	Gly	Asp	Asp	Leu	Asp	Asp	Ser	Met	Ser
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Glu	Val	Asn	Ser	Arg	Arg	Ser	Thr	Leu	Ile	Ser	Leu	Asn	Ile	Gly	Ala
	530					535					540				
Ser	Ser	Asp	Glu	Asp	Thr	Ser	Ser	Ser	Gly	Ser	Arg	Phe	Lys	Met	Lys
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<211> 1146

<212> PRT

<213> Arabidopsis thaliana

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		20					25					30			
Pro	Val	Asp	Ala	Val	Leu	Phe	Val	Gly	Met	Ser	Leu	Val	Leu	Gly	Ile

		35					40					45						
Ala	Ser	Arg	His	Leu	Leu	Arg	Gly	Thr	Arg	Val	Pro	Tyr	Thr	Val	Ala			
	50					55				60								
Leu	Leu	Val	Ile	Gly	Ile	Ala	Leu	Gly	Ser	Leu	Glu	Tyr	Gly	Ala	Lys			
65				70					75						80			
His	Asn	Leu	Gly	Lys	Ile	Gly	His	Gly	Ile	Arg	Ile	Trp	Asn	Glu	Ile			
				85				90						95				
Asp	Pro	Glu	Leu	Leu	Leu	Ala	Val	Phe	Leu	Pro	Ala	Leu	Leu	Phe	Glu			
			100					105					110					
Ser	Ser	Phe	Ser	Met	Glu	Val	His	Gln	Ile	Lys	Arg	Cys	Leu	Gly	Gln			
		115					120				125							
Met	Val	Leu	Leu	Ala	Val	Pro	Gly	Val	Leu	Ile	Ser	Thr	Ala	Cys	Leu			
	130					135					140							
Gly	Ser	Leu	Val	Lys	Val	Thr	Phe	Pro	Tyr	Glu	Trp	Asp	Trp	Lys	Thr			
145				150						155					160			
Ser	Leu	Leu	Leu	Gly	Gly	Leu	Leu	Ser	Ala	Thr	Asp	Pro	Val	Ala	Val			
				165					170					175				
Val	Ala	Leu	Leu	Lys	Glu	Leu	Gly	Ala	Ser	Lys	Lys	Leu	Ser	Thr	Ile			
			180					185					190					
Ile	Glu	Gly	Glu	Ser	Leu	Met	Asn	Asp	Gly	Thr	Ala	Ile	Val	Val	Phe			
		195					200					205						
Gln	Leu	Phe	Leu	Lys	Met	Ala	Met	Gly	Gln	Asn	Ser	Asp	Trp	Ser	Ser			
	210					215					220							
Ile	Ile	Lys	Phe	Leu	Leu	Lys	Val	Ala	Leu	Gly	Ala	Val	Gly	Ile	Gly			
225				230						235					240			
Leu	Ala	Phe	Gly	Ile	Ala	Ser	Val	Ile	Trp	Leu	Lys	Phe	Ile	Phe	Asn			
				245					250					255				
Asp	Thr	Val	Ile	Glu	Ile	Thr	Leu	Thr	Ile	Ala	Val	Ser	Tyr	Phe	Ala			
			260					265					270					
Tyr	Tyr	Thr	Ala	Gln	Glu	Trp	Ala	Gly	Ala	Ser	Gly	Val	Leu	Thr	Val			
		275					280					285						
Met	Thr	Leu	Gly	Met	Phe	Tyr	Ala	Ala	Phe	Ala	Arg	Thr	Ala	Phe	Lys			
	290					295					300							
Gly	Asp	Ser	Gln	Lys	Ser	Leu	His	His	Phe	Trp	Glu	Met	Val	Ala	Tyr			
305				310						315					320			
Ile	Ala	Asn	Thr	Leu	Ile	Phe	Ile	Leu	Ser	Gly	Val	Val	Ile	Ala	Glu			
				325					330					335				
Gly	Ile	Leu	Asp	Ser	Asp	Lys	Ile	Ala	Tyr	Gln	Gly	Asn	Ser	Trp	Arg			
			340					345					350					
Phe	Leu	Phe	Leu	Leu	Tyr	Val	Tyr	Ile	Gln	Leu	Ser	Arg	Val	Val	Val			
		355					360					365						
Val	Gly	Val	Leu	Tyr	Pro	Leu	Leu	Cys	Arg	Phe	Gly	Tyr	Gly	Leu	Asp			
	370					375					380							

Glu	Ser	Tyr	Ile	Ser	Ser	Leu	Lys	Gly	Ser	Glu	Gly	Glu	Leu	Val	His		
			500					505					510				
His	Pro	His	Asn	Gly	Ser	Lys	Ile	Gly	Ser	Leu	Asp	Pro	Lys	Ser	Leu		
			515				520					525					
Lys	Asp	Ile	Arg	Met	Arg	Phe	Leu	Asn	Gly	Val	Gln	Ala	Thr	Tyr	Trp		
			530			535					540						
Glu	Met	Leu	Asp	Glu	Gly	Arg	Ile	Ser	Glu	Val	Thr	Ala	Asn	Ile	Leu		
545					550					555					560		
Met	Gln	Ser	Val	Asp	Glu	Ala	Leu	Asp	Gln	Val	Ser	Thr	Thr	Leu	Cys		
			565						570						575		
Asp	Trp	Arg	Gly	Leu	Lys	Pro	His	Val	Asn	Phe	Pro	Asn	Tyr	Tyr	Asn		
			580					585					590				
Phe	Leu	His	Ser	Lys	Val	Val	Pro	Arg	Lys	Leu	Val	Thr	Tyr	Phe	Ala		
			595				600					605					
Val	Glu	Arg	Leu	Glu	Ser	Ala	Cys	Tyr	Ile	Ser	Ala	Ala	Phe	Leu	Arg		
			610			615					620						
Ala	His	Thr	Ile	Ala	Arg	Gln	Gln	Leu	Tyr	Asp	Phe	Leu	Gly	Glu	Ser		
625					630					635					640		
Asn	Ile	Gly	Ser	Ile	Val	Ile	Asn	Glu	Ser	Glu	Lys	Glu	Gly	Glu	Glu		
			645					650							655		
Ala	Lys	Lys	Phe	Leu	Glu	Lys	Val	Arg	Ser	Ser	Phe	Pro	Gln	Val	Leu		
			660					665					670				
Arg	Val	Val	Lys	Thr	Lys	Gln	Val	Thr	Tyr	Ser	Val	Leu	Asn	His	Leu		
			675				680						685				
Leu	Gly	Tyr	Ile	Glu	Asn	Leu	Glu	Lys	Val	Gly	Leu	Leu	Glu	Glu	Lys		
			690			695					700						
Glu	Ile	Ala	His	Leu	His	Asp	Ala	Val	Gln	Thr	Gly	Leu	Lys	Lys	Leu		
705					710					715					720		
Leu	Arg	Asn	Pro	Pro	Ile	Val	Lys	Leu	Pro	Lys	Leu	Ser	Asp	Met	Ile		
			725						730					735			
Thr	Ser	His	Pro	Leu	Ser	Val	Ala	Leu	Pro	Pro	Ala	Phe	Cys	Glu	Pro		
			740					745					750				
Leu	Lys	His	Ser	Lys	Lys	Glu	Pro	Met	Lys	Leu	Arg	Gly	Val	Thr	Leu		
			755				760					765					
Tyr	Lys	Glu	Gly	Ser	Lys	Pro	Thr	Gly	Val	Trp	Leu	Ile	Phe	Asp	Gly		
			770			775					780						
Ile	Val	Lys	Trp	Lys	Ser	Lys	Ile	Leu	Ser	Asn	Asn	His	Ser	Leu	His		
785					790					795					800		
Pro	Thr	Phe	Ser	His	Gly	Ser	Thr	Leu	Gly	Leu	Tyr	Glu	Val	Leu	Thr		
			805						810						815		
Gly	Lys	Pro	Tyr	Leu	Cys	Asp	Leu	Ile	Thr	Asp	Ser	Met	Val	Leu	Cys		
			820					825					830				
Phe	Phe	Ile	Asp	Ser	Glu	Lys	Ile	Leu	Ser	Leu	Gln	Ser	Asp	Ser	Thr		
			835				840					845					
Ile	Asp	Asp	Phe	Leu	Trp	Gln	Glu	Ser	Ala	Leu	Val	Leu	Leu	Lys	Leu		
			850			855					860						
Leu	Arg	Pro	Gln	Ile	Phe	Glu	Ser	Val	Ala	Met	Gln	Glu	Leu	Arg	Ala		
865					870					875					880		
Leu	Val	Ser	Thr	Glu	Ser	Ser	Lys	Leu	Thr	Thr	Tyr	Val	Thr	Gly	Glu		
			885						890						895		
Ser	Ile	Glu	Ile	Asp	Cys	Asn	Ser	Ile	Gly	Leu	Leu	Leu	Glu	Gly	Phe		
			900					905					910				
Val	Lys	Pro	Val	Gly	Ile	Lys	Glu	Glu	Leu	Ile	Ser	Ser	Pro	Ala	Ala		
			915				920					925					
Leu	Ser	Pro	Ser	Asn	Gly	Asn	Gln	Ser	Phe	His	Asn	Ser	Ser	Glu	Ala		
			930			935					940						
Ser	Gly	Ile	Met	Arg	Val	Ser	Phe	Ser	Gln	Gln	Ala	Thr	Gln	Tyr	Ile		

945 950 955 960
 Val Glu Thr Arg Ala Arg Ala Ile Ile Phe Asn Ile Gly Ala Phe Gly
 965 970 975
 . Ala Asp Arg Thr Leu His Arg Arg Pro Ser Ser Leu Thr Pro Pro Arg
 980 985 990
 Ser Ser Ser Ser Asp Gln Leu Gln Arg Ser Phe Arg Lys Glu His Arg
 995 1000 1005
 Gly Leu Met Ser Trp Pro Glu Asn Ile Tyr Ala Lys Gln Gln Gln Glu
 1010 1015 1020
 Ile Asn Lys Thr Thr Leu Ser Leu Ser Glu Arg Ala Met Gln Leu Ser
 1025 1030 1035 1040
 Ile Phe Gly Ser Met Val Asn Val Tyr Arg Arg Ser Val Ser Phe Gly
 1045 1050 1055
 Gly Ile Tyr Asn Asn Lys Leu Gln Asp Asn Leu Leu Tyr Lys Lys Leu
 1060 1065 1070
 Pro Leu Asn Pro Ala Gln Gly Leu Val Ser Ala Lys Ser Glu Ser Ser
 1075 1080 1085
 Ile Val Thr Lys Lys Gln Leu Glu Thr Arg Lys His Ala Cys Gln Leu
 1090 1095 1100
 Pro Leu Lys Gly Glu Ser Ser Thr Arg Gln Asn Thr Met Val Glu Ser
 1105 1110 1115 1120
 Ser Asp Glu Glu Asp Glu Asp Glu Gly Ile Val Val Arg Ile Asp Ser
 1125 1130 1135
 Pro Ser Lys Ile Val Phe Arg Asn Asp Leu
 1140 1145

<210> 10
 <211> 555
 <212> PRT
 <213> Atriplex gmelini

<400> 10
 Met Trp Ser Gln Leu Ser Ser Leu Leu Ser Gly Lys Met Asp Ala Leu
 1 5 10 15
 Thr Thr Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala
 20 25 30
 Leu Leu Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg
 35 40 45
 Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ala Thr Gly
 50 55 60
 Val Val Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val
 65 70 75 80
 Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
 85 90 95
 Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile
 100 105 110
 Thr Ile Val Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Thr Ile
 115 120 125
 Ile Ser Leu Gly Ala Leu Ser Ile Phe Lys Lys Leu Asp Ile Gly Thr
 130 135 140
 Leu Glu Leu Ala Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr
 145 150 155 160
 Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu
 165 170 175
 Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser
 180 185 190

Val	Val	Leu	Phe	Asn	Ala	Ile	Gln	Ser	Phe	Asp	Leu	Thr	Arg	Ile	Asp
		195					200					205			
His	Arg	Ile	Ala	Leu	Gln	Phe	Met	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ile
	210					215					220				
Ala	Ser	Thr	Ile	Leu	Gly	Ala	Phe	Thr	Gly	Leu	Leu	Ser	Ala	Tyr	Ile
225					230					235					240
Ile	Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala
			245						250					255	
Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe
		260						265					270		
Tyr	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	Ser
	275						280					285			
His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys
	290					295					300				
His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Val	Ala	Glu	Val	Phe	Leu	Phe	Leu
305					310					315					320
Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Arg	Phe	Val	Ser
			325						330					335	
Asp	Ser	Pro	Gly	Ile	Ser	Val	Ala	Val	Ser	Ser	Ile	Leu	Leu	Gly	Leu
			340					345					350		
Val	Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Trp	Leu	Met
	355						360					365			
Asn	Phe	Ala	Lys	Lys	Ser	Gln	Ser	Glu	Lys	Val	Thr	Phe	Asn	Gln	Gln
	370					375					380				
Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala
385					390					395					400
Leu	Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	Arg	Gly
			405						410					415	
Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Ser	Val	Val	Leu	Phe	Ser	Thr
		420						425					430		
Met	Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Met	Phe	Leu	Leu	Pro
	435						440					445			
Gln	Pro	Lys	His	Phe	Thr	Ser	Cys	Ser	Thr	Val	Ser	Asp	Val	Gly	Ser
	450					455					460				
Pro	Lys	Ser	Tyr	Ser	Leu	Pro	Leu	Leu	Glu	Gly	Asn	Gln	Asp	Tyr	Glu
465					470					475					480
Val	Asp	Val	Gly	Asn	Gly	Asn	His	Glu	Asp	Thr	Thr	Glu	Pro	Arg	Thr
			485						490					495	
Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Met	Leu	Leu	Asn	Ala	Pro	Thr	His
		500						505					510		
Thr	Val	His	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ser	Phe	Met	Arg	Pro	
	515					520					525				
Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro	Thr
	530					535					540				
Glu	Gln	Ser	Thr	Asn	Asn	Leu	Val	Asp	Arg	Thr					
545					550					555					

<210> 11

<211> 985

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 11

Met	Ala	Ile	Trp	Glu	Gln	Leu	Glu	Val	Ser	Lys	Ala	His	Val	Ala	Tyr
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Ala	Cys	Val	Gly	Val	Phe	Ser	Ser	Ile	Phe	Ser	Leu	Val	Ser	Leu	Tyr

Ser	Leu	His	Arg	Met	Asp	Thr	Gln	Met	Thr	Leu	Ser	Gly	Asp	Glu	Gly	
				485					490					495		
Glu	Ala	Glu	Glu	Gly	Gly	Gly	Arg	Lys	Gly	Leu	Ala	Gly	Gly	Glu	Asp	
			500					505					510			
Glu	Glu	Gly	Leu	Asn	Asn	Asp	Gln	Ile	Gly	Ser	Val	Ala	Thr	Ser	Gly	
		515					520					525				
Ile	Pro	Ala	Arg	Pro	Ala	Gly	Gly	Met	Pro	Arg	Arg	Arg	Lys	Leu	Ser	
	530					535					540					
Arg	Lys	Glu	Lys	Arg	Leu	Asn	Arg	Arg	Gln	Lys	Leu	Arg	Asn	Lys	Gly	
545					550					555					560	
Arg	Glu	Ile	Phe	Ser	Ser	Arg	Ser	Lys	Asn	Glu	Met	Tyr	Asp	Asp	Asp	
			565						570					575		
Glu	Leu	Asn	Asp	Leu	Gly	Arg	Glu	Arg	Leu	Gln	Lys	Glu	Lys	Glu	Ala	
		580						585					590			
Arg	Ala	Ala	Thr	Phe	Ala	Leu	Ser	Thr	Ala	Val	Asn	Thr	Gln	Arg	Asn	
	595						600					605				
Glu	Glu	Ile	Gly	Met	Gly	Gly	Asp	Glu	Glu	Glu	Asp	Glu	Tyr	Thr	Pro	
	610				615						620					
Glu	Lys	Glu	Tyr	Ser	Asp	Asn	Tyr	Asn	Asn	Thr	Pro	Ser	Phe	Glu	Ser	
625					630					635					640	
Ser	Glu	Arg	Ser	Ser	Ser	Leu	Arg	Gly	Arg	Thr	Tyr	Val	Pro	Arg	Asn	
			645						650					655		
Arg	Tyr	Asp	Gly	Glu	Glu	Thr	Glu	Ser	Glu	Ile	Glu	Ser	Glu	Asp	Glu	
		660						665					670			
Met	Glu	Asn	Glu	Ser	Glu	Arg	Ser	Met	Ala	Ser	Ser	Glu	Glu	Arg	Arg	
	675						680						685			
Ile	Arg	Lys	Met	Lys	Glu	Glu	Glu	Met	Lys	Pro	Gly	Thr	Ala	Tyr	Leu	
	690					695					700					
Asp	Gly	Asn	Arg	Met	Ile	Glu	Asn	Lys	Gln	Gly	Glu	Ile	Leu	Asn		
705					710				715					720		
Gln	Val	Asp	Ile	Glu	Asp	Arg	Asn	Glu	Ala	Arg	Asp	Asp	Glu	Val	Ser	
			725						730					735		
Val	Asp	Ser	Thr	Ala	His	Ser	Ser	Leu	Thr	Thr	Thr	Met	Thr	Asn	Leu	
		740						745					750			
Ser	Ser	Ser	Ser	Gly	Gly	Arg	Leu	Lys	Arg	Ile	Leu	Thr	Pro	Thr	Ser	
	755						760					765				
Leu	Gly	Lys	Ile	His	Ser	Leu	Val	Asp	Lys	Gly	Lys	Asp	Lys	Asn	Lys	
	770					775					780					
Asn	Ser	Lys	Tyr	His	Ala	Phe	Lys	Ile	Asp	Asn	Leu	Leu	Ile	Ile	Glu	
785					790				795						800	
Asn	Glu	Asp	Gly	Asp	Val	Ile	Lys	Arg	Tyr	Lys	Ile	Asn	Pro	His	Lys	
			805						810					815		
Ser	Asp	Asp	Asp	Lys	Ser	Lys	Asn	Arg	Pro	Arg	Asn	Asp	Ser	Val	Val	
		820						825					830			
Ser	Arg	Ala	Leu	Thr	Ala	Val	Gly	Leu	Lys	Ser	Lys	Ala	Asn	Ser	Gly	
	835						840					845				
Val	Pro	Pro	Pro	Val	Asp	Glu	Glu	Lys	Ala	Ile	Glu	Gly	Pro	Ser	Arg	
	850					855					860					
Lys	Gly	Pro	Gly	Met	Leu	Lys	Lys	Arg	Thr	Leu	Thr	Pro	Ala	Pro	Pro	
865					870					875					880	
Arg	Gly	Val	Gln	Asp	Ser	Leu	Asp	Leu	Glu	Asp	Glu	Pro	Ser	Ser	Glu	
			885						890					895		
Glu	Asp	Leu	Gly	Asp	Ser	Tyr	Asn	Met	Asp	Asp	Ser	Glu	Asp	Tyr	Asp	
		900						905					910			
Asp	Asn	Ala	Tyr	Glu	Ser	Glu	Thr	Glu	Phe	Glu	Arg	Gln	Arg	Arg	Leu	
	915						920					925				
Asn	Ala	Leu	Gly	Glu	Met	Thr	Ala	Pro	Ala	Asp	Gln	Asp	Asp	Glu	Glu	

930		935		940
Leu Pro Pro Leu Pro Val Glu Ala Gln Thr Gly Asn Asp Gly Pro Gly				
945		950		955
Thr Ala Glu Gly Lys Lys Lys Gln Lys Ser Ala Ala Val Lys Ser Ala				
	965		970	975
Leu Ser Lys Thr Leu Gly Leu Asn Lys				
	980		985	

<210> 12
 <211> 633
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 12

Met Leu Ser Lys Val Leu Leu Asn Ile Ala Phe Lys Val Leu Leu Thr				
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Thr Ala Lys Arg Ala Val Asp Pro Asp Asp Asp Asp Glu Leu Leu Pro				
	20	25	30	
Ser Pro Asp Leu Pro Gly Ser Asp Asp Pro Ile Ala Gly Asp Pro Asp				
	35	40	45	
Val Asp Leu Asn Pro Val Thr Glu Glu Met Phe Ser Ser Trp Ala Leu				
	50	55	60	
Phe Ile Met Leu Leu Leu Leu Ile Ser Ala Leu Trp Ser Ser Tyr Tyr				
65	70	75	80	
Leu Thr Gln Lys Arg Ile Arg Ala Val His Glu Thr Val Leu Ser Ile				
	85	90	95	
Phe Tyr Gly Met Val Ile Gly Leu Ile Ile Arg Met Ser Pro Gly His				
	100	105	110	
Tyr Ile Gln Asp Thr Val Thr Phe Asn Ser Ser Tyr Phe Phe Asn Val				
	115	120	125	
Leu Leu Pro Pro Ile Ile Leu Asn Ser Gly Tyr Glu Leu Asn Gln Val				
	130	135	140	
Asn Phe Phe Asn Asn Met Leu Ser Ile Leu Ile Phe Ala Ile Pro Gly				
145	150	155	160	
Thr Phe Ile Ser Ala Val Val Ile Gly Ile Ile Leu Tyr Ile Trp Thr				
	165	170	175	
Phe Leu Gly Leu Glu Ser Ile Asp Ile Ser Phe Ala Asp Ala Met Ser				
	180	185	190	
Val Gly Ala Thr Leu Ser Ala Thr Asp Pro Val Thr Ile Leu Ser Ile				
	195	200	205	
Phe Asn Ala Tyr Lys Val Asp Pro Lys Leu Tyr Thr Ile Ile Phe Gly				
	210	215	220	
Glu Ser Leu Leu Asn Asp Ala Ile Ser Ile Val Met Phe Glu Thr Cys				
225	230	235	240	
Gln Lys Phe His Gly Gln Pro Ala Thr Phe Ser Ser Val Phe Glu Gly				
	245	250	255	
Ala Gly Leu Phe Leu Met Thr Phe Ser Val Ser Leu Leu Ile Gly Val				
	260	265	270	
Leu Ile Gly Ile Leu Val Ala Leu Leu Leu Lys His Thr His Ile Arg				
	275	280	285	
Arg Tyr Pro Gln Ile Glu Ser Cys Leu Ile Leu Leu Ile Ala Tyr Glu				
	290	295	300	
Ser Tyr Phe Phe Ser Asn Gly Cys His Met Ser Gly Ile Val Ser Leu				
305	310	315	320	
Leu Phe Cys Gly Ile Thr Leu Lys His Tyr Ala Tyr Tyr Asn Met Ser				
	325	330	335	

Arg	Arg	Ser	Gln	Ile	Thr	Ile	Lys	Tyr	Ile	Phe	Gln	Leu	Leu	Ala	Arg
			340					345					350		
Leu	Ser	Glu	Asn	Phe	Ile	Phe	Ile	Tyr	Leu	Gly	Leu	Glu	Leu	Phe	Thr
		355					360					365			
Glu	Val	Glu	Leu	Val	Tyr	Lys	Pro	Leu	Leu	Ile	Ile	Val	Ala	Ala	Ile
		370				375					380				
Ser	Ile	Cys	Val	Ala	Arg	Trp	Cys	Ala	Val	Phe	Pro	Leu	Ser	Gln	Phe
385					390					395					400
Val	Asn	Trp	Ile	Tyr	Arg	Val	Lys	Thr	Ile	Arg	Ser	Met	Ser	Gly	Ile
			405						410					415	
Thr	Gly	Glu	Asn	Ile	Ser	Val	Pro	Asp	Glu	Ile	Pro	Tyr	Asn	Tyr	Gln
			420					425					430		
Met	Met	Thr	Phe	Trp	Ala	Gly	Leu	Arg	Gly	Ala	Val	Gly	Val	Ala	Leu
		435					440					445			
Ala	Leu	Gly	Ile	Gln	Gly	Glu	Tyr	Lys	Phe	Thr	Leu	Leu	Ala	Thr	Val
	450					455					460				
Leu	Val	Val	Val	Val	Leu	Thr	Val	Ile	Ile	Phe	Gly	Gly	Thr	Thr	Ala
465					470					475					480
Gly	Met	Leu	Glu	Val	Leu	Asn	Ile	Lys	Thr	Gly	Cys	Ile	Ser	Glu	Glu
			485						490					495	
Asp	Thr	Ser	Asp	Asp	Glu	Phe	Asp	Ile	Glu	Ala	Pro	Arg	Ala	Ile	Asn
			500					505					510		
Leu	Leu	Asn	Gly	Ser	Ser	Ile	Gln	Thr	Asp	Leu	Gly	Pro	Tyr	Ser	Asp
		515					520					525			
Asn	Asn	Ser	Pro	Asp	Ile	Ser	Ile	Asp	Gln	Phe	Ala	Val	Ser	Ser	Asn
	530					535					540				
Lys	Asn	Leu	Pro	Asn	Asn	Ile	Ser	Thr	Thr	Gly	Gly	Asn	Thr	Phe	Gly
545				550						555					560
Gly	Leu	Asn	Glu	Thr	Glu	Asn	Thr	Ser	Pro	Asn	Pro	Ala	Arg	Ser	Ser
			565						570					575	
Met	Asp	Lys	Arg	Asn	Leu	Arg	Asp	Lys	Leu	Gly	Thr	Ile	Phe	Asn	Ser
			580					585					590		
Asp	Ser	Gln	Trp	Phe	Gln	Asn	Phe	Asp	Glu	Gln	Val	Leu	Lys	Pro	Val
		595					600					605			
Phe	Leu	Asp	Asn	Val	Ser	Pro	Ser	Leu	Gln	Asp	Ser	Ala	Thr	Gln	Ser
	610					615					620				
Pro	Ala	Asp	Phe	Ser	Ser	Gln	Asn	His							
625					630										

<210> 13

<211> 546

<212> PRT

<213> Arabidopsis thaliana

<400> 13

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Ser	Asp	His	Ala	Ser	Val	Val	Ser	Leu	Asn	Leu	Phe	Val	Ala	Leu	Leu
			20					25					30		
Cys	Ala	Cys	Ile	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Met
	35					40						45			
Asn	Glu	Ser	Ile	Thr	Ala	Leu	Leu	Ile	Gly	Leu	Gly	Thr	Gly	Val	Val
	50					55					60				
Ile	Leu	Leu	Ile	Ser	Arg	Gly	Lys	Asn	Ser	His	Leu	Leu	Val	Phe	Ser
65				70						75				80	
Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala

Lys Pro
545

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<213> Arabidopsis thaliana

<400> 14

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His	Pro	Gln	Val	Ile	Pro	Ile	Ser	Val	Phe	Ile	Ala	Ile	Leu	Cys	Leu
			20					25					30		
Cys	Leu	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Val	Asn	Glu
		35					40					45			
Ser	Ile	Thr	Ala	Ile	Leu	Val	Gly	Ala	Ala	Ser	Gly	Thr	Val	Ile	Leu
	50					55					60				
Leu	Ile	Ser	Lys	Gly	Lys	Ser	Ser	His	Ile	Leu	Val	Phe	Asp	Glu	Glu
65					70					75				80	
Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala	Gly	Phe
				85					90					95	
Gln	Val	Lys	Lys	Lys	Lys	Phe	Phe	His	Asn	Phe	Leu	Thr	Ile	Met	Ser
		100						105					110		
Phe	Gly	Val	Ile	Gly	Val	Phe	Ile	Ser	Thr	Val	Ile	Ile	Ser	Phe	Gly
	115						120					125			
Thr	Trp	Trp	Leu	Phe	Pro	Lys	Leu	Gly	Phe	Lys	Gly	Leu	Ser	Ala	Arg
	130					135					140				
Asp	Tyr	Leu	Ala	Ile	Gly	Thr	Ile	Phe	Ser	Ser	Thr	Asp	Thr	Val	Cys
145				150						155				160	
Thr	Leu	Gln	Ile	Leu	His	Gln	Asp	Glu	Thr	Pro	Leu	Leu	Tyr	Ser	Leu
			165						170					175	
Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	Val	Leu	Phe
		180						185					190		
Asn	Ala	Val	Gln	Lys	Ile	Gln	Phe	Glu	Ser	Leu	Thr	Gly	Trp	Thr	Ala
	195						200					205			
Leu	Gln	Val	Phe	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ser	Thr	Ser	Thr	Leu
	210				215						220				
Leu	Gly	Ile	Gly	Val	Gly	Leu	Ile	Thr	Ser	Phe	Val	Leu	Lys	Thr	Leu
225					230					235				240	
Tyr	Phe	Gly	Arg	His	Ser	Thr	Thr	Arg	Glu	Leu	Ala	Ile	Met	Val	Leu
			245						250				255		
Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Ser	Leu	Ser	Gly
		260						265					270		
Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Val	Leu	Met	Ser	His	Tyr	Ala	Ser
		275					280					285			
Tyr	Asn	Val	Thr	Glu	Ser	Ser	Arg	Ile	Thr	Ser	Arg	His	Val	Phe	Ala
	290					295					300				
Met	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Ile	Phe	Leu	Tyr	Val	Gly	Thr
305					310					315				320	
Asp	Ala	Leu	Asp	Phe	Thr	Lys	Trp	Lys	Thr	Ser	Ser	Leu	Ser	Phe	Gly
			325						330					335	
Gly	Thr	Leu	Gly	Val	Ser	Gly	Val	Ile	Thr	Ala	Leu	Val	Leu	Leu	Gly
		340						345				350			
Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Val	Leu	Thr	Asn	Phe	Met	Asn
	355						360					365			
Arg	His	Thr	Glu	Arg	Asn	Glu	Ser	Ile	Thr	Phe	Lys	His	Gln	Val	Ile

370		375		380
Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala				
385		390		395
Phe Lys Gln Phe Thr Tyr Ser Gly Val Thr Leu Asp Pro Val Asn Ala				400
	405		410	415
Ala Met Val Thr Asn Thr Thr Ile Val Val Leu Phe Thr Thr Leu Val				
	420		425	430
Phe Gly Phe Leu Thr Lys Pro Leu Val Asn Tyr Leu Leu Pro Gln Asp				
	435		440	445
Ala Ser His Asn Thr Gly Asn Arg Gly Lys Arg Thr Glu Pro Gly Ser				
	450		455	460
Pro Lys Glu Asp Ala Thr Leu Pro Leu Leu Ser Phe Asp Glu Ser Ala				
465		470		475
Ser Thr Asn Phe Asn Arg Ala Lys Asp Ser Ile Ser Leu Leu Met Glu				480
	485		490	495
Gln Pro Val Tyr Thr Ile His Arg Tyr Trp Arg Lys Phe Asp Asp Thr				
	500		505	510
Tyr Met Arg Pro Ile Phe Gly Gly Pro Arg Arg Glu Asn Gln Pro Glu				
	515		520	525

Cys

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<400> 15

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	20	25
Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Thr Arg Trp		
	35	40
Met Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Ser Cys Thr Gly Ile		
	50	55
Val Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser Arg Ile Leu Val Phe		
65	70	75
Ser Glu Asp Leu Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn		
	85	90
Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr		
	100	105
Ile Met Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Phe Val Ile Ile		
	115	120
Ser Phe Gly Ala Lys His Leu Phe Glu Lys Met Asn Ile Gly Asp Leu		
	130	135
Thr Ile Ala Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp		
145	150	155
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu		
	165	170
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val		
	180	185
Val Leu Phe Asn Ala Ile Gln Arg Phe Asp Leu Thr Asn Ile Asn Ser		
	195	200
Ala Ile Ala Leu Glu Phe Ala Gly Asn Phe Phe Tyr Leu Phe Ile Leu		
	210	215
		220

Ser Thr Ala Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Phe Val Ile
 225 230 235 240
 Lys Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu
 245 250 255
 Met Met Leu Leu Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe His
 260 265 270
 Leu Ser Ser Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His
 275 280 285
 Tyr Thr Trp His Asn Val Thr Asp Lys Ser Lys Val Thr Thr Lys His
 290 295 300
 Thr Phe Ala Ala Met Ser Phe Leu Ala Glu Ile Phe Ile Phe Leu Tyr
 305 310 315 320
 Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Asp Val Val Arg Asn
 325 330 335
 Ser Pro Gly Gln Ser Ile Gly Val Ser Ser Ile Leu Leu Gly Leu Ile
 340 345 350
 Leu Leu Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Thr Lys Ser Ser Pro Asp Glu Lys Ile Asp Leu Lys Lys Gln Val
 370 375 380
 Thr Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu
 385 390 395 400
 Ala Tyr Asn Gln Phe Thr Thr Ser Gly His Thr Lys Val Leu Gly Asn
 405 410 415
 Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Val
 420 425 430
 Val Phe Gly Leu Leu Thr Lys Pro Leu Val Lys His Leu Gln Pro Ser
 435 440 445
 Ser Lys Gln Ser Ser Thr Thr Ala Leu Gln Ile Thr Leu Arg Ser Ser
 450 455 460
 Phe His Asp Pro Ile Leu His Glu Pro Leu Leu Ser Thr Gln Gly Gln
 465 470 475 480
 Ser Glu Tyr Asp Pro Glu Gln His Val Ser Phe Arg Met Phe Trp Lys
 485 490 495
 Ser Pro Ser Arg Ala Ile His His Tyr Trp Arg Lys Phe Asp Asn Ala
 500 505 510
 Val Met Arg Arg Ile Phe Gly Gly Arg Gly Val Ser Pro Val Val Pro
 515 520 525
 Gly Ser Pro Ile Glu Asn Ser Val Pro Gln Trp Ser Glu Glu Val Glu
 530 535 540
 Asn Lys Glu Gln Asn Gly Glu Pro
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 Val Lys Gln Gln Gln Ala Ala Gly Val Gly Ile Leu Leu Gln Ile Met
 20 25 30
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 35 40 45
 Phe His Tyr Leu Pro Glu Ala Ser Gly Leu Ile Val Gly Ile Leu Ala

50	55	60																	
Asn	Ile	Ser	Asp	Thr	Glu	Thr	Ser	Ile	Arg	Phe	Cys	Pro	Pro	Pro	Ser				
65					70					75					80				
Ile	Pro	Glu	Phe	Ser	Leu	Leu	Ser	Phe	Pro	Arg	Ser	Leu	Lys	Pro	Phe				
				85					90					95					
Phe	Ser	Asn	Phe	Gly	Ala	Ile	Val	Thr	Phe	Ala	Ile	Ile	Gly	Thr	Phe				
			100					105					110						
Val	Ala	Ser	Val	Val	Thr	Gly	Gly	Leu	Val	Tyr	Leu	Gly	Gly	Ser	Met				
		115				120						125							
Tyr	Leu	Met	Tyr	Lys	Leu	Pro	Phe	Val	Glu	Cys	Leu	Met	Phe	Gly	Ala				
	130				135						140								
Leu	Ile	Ser	Ala	Thr	Asp	Pro	Val	Thr	Val	Leu	Ser	Ile	Phe	Gln	Asp				
145					150					155					160				
Val	Gly	Thr	Asp	Val	Asn	Leu	Tyr	Ala	Leu	Val	Phe	Gly	Glu	Ser	Val				
			165						170					175					
Leu	Asn	Asp	Ala	Val	Ser	Phe	Tyr	Tyr	Leu	Leu	Arg	Tyr	Trp	Ala	Leu				
		180					185						190						
Pro	Phe	Lys	Phe	Phe	Glu	Thr	Phe	Ala	Gly	Ser	Met	Ser	Ala	Glu	His				
		195				200						205							
Leu	Phe	Lys	Tyr	Ala	Gly	Leu	Asp	Thr	Glu	Asn	Leu	Gln	Asn	Leu	Glu				
	210				215						220								
Cys	Cys	Leu	Phe	Val	Leu	Phe	Pro	Tyr	Phe	Ser	Tyr	Met	Leu	Ala	Glu				
225					230					235				240					
Gly	Val	Gly	Leu	Ser	Gly	Ile	Val	Ser	Ile	Leu	Phe	Thr	Gly	Ile	Val				
			245						250				255						
Met	Lys	Arg	Tyr	Thr	Phe	Ser	Asn	Leu	Ser	Glu	Ala	Ser	Gln	Ser	Phe				
			260					265					270						
Val	Ser	Ser	Phe	Phe	His	Leu	Ile	Ser	Ser	Leu	Ala	Glu	Thr	Phe	Thr				
		275					280						285						
Phe	Ile	Tyr	Met	Gly	Phe	Asp	Ile	Ala	Met	Glu	Gln	His	Ser	Trp	Ser				
	290					295					300								
His	Val	Gly	Phe	Ile	Leu	Phe	Ser	Ile	Val	Ser	Ser	Phe	Thr	Asp	Arg				
305					310					315				320					
Gln	Ala	Val	Asn	Val	Phe	Gly	Cys	Ala	Tyr	Leu	Val	Asn	Leu	Phe	Arg				
			325						330					335					
Gln	Glu	Asn	Gln	Lys	Ile	Pro	Met	Lys	His	Gln	Lys	Ala	Leu	Trp	Tyr				
		340						345					350						
Ser	Gly	Leu	Arg	Gly	Ala	Met	Ala	Phe	Ala	Leu	Ala	Leu	Gln	Ser	Leu				
		355				360						365							
His	Asp	Leu	Pro	Glu	Gly	His	Gly	Gln	Ile	Ile	Phe	Thr	Ala	Thr	Thr				
	370				375						380								
Thr	Ile	Val	Val	Val	Thr	Val	Leu	Leu	Ile	Gly	Gly	Ser	Thr	Gly	Lys				
385					390					395				400					
Met	Leu	Glu	Ala	Leu	Glu	Val	Val	Gly	Asp	Asp	Leu	Asp	Asp	Ser	Met				
				405					410				415						
Ser	Glu	Gly	Phe	Glu	Glu	Ser	Asp	His	Gln	Tyr	Val	Pro	Pro	Pro	Phe				
			420				425					430							
Ser	Ile	Gly	Ala	Ser	Ser	Asp	Glu	Asp	Thr	Ser	Ser	Ser	Gly	Ser	Arg				
		435				440						445							
Phe	Lys	Met	Lys	Leu	Lys	Glu	Phe	His	Lys	Thr	Thr	Thr	Ser	Phe	Thr				
	450				455					460									
Ala	Leu	Asp	Lys	Asn	Phe	Leu	Thr	Pro	Phe	Phe	Thr	Thr	Asn	Ser	Gly				
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Asp	Gly	Asp	Gly	Asp	Gly	Glu													
				485															

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<400> 17

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Gln	Glu	Lys	Gln	Gln	Ala	Ala	Gly	Val	Gly	Ile	Leu	Leu	Gln	Ile	
		20					25					30			
Met	Met	Leu	Val	Leu	Ser	Phe	Val	Leu	Gly	His	Val	Leu	Arg	Arg	His
		35					40					45			
Lys	Phe	Tyr	Tyr	Leu	Pro	Glu	Ala	Ser	Ala	Ser	Leu	Leu	Ile	Gly	Leu
	50					55					60				
Ile	Val	Gly	Gly	Leu	Ala	Asn	Ile	Ser	Asn	Thr	Glu	Thr	Ser	Ile	Arg
65					70					75					80
Phe	Val	Glu	Leu	Phe	Leu	Ile	Ser	Phe	Phe	Arg	His	Gly	Ser	Ile	Ser
				85					90					95	
Thr	Met	Ser	Ser	Ser	Phe	Cys	Phe	Cys	Cys	Leu	Pro	Ser	Tyr	Tyr	Ile
			100					105					110		
Leu	Lys	Ile	Glu	Tyr	Leu	Gly	Gly	Val	Met	Phe	Leu	Met	Tyr	Arg	Leu
		115					120					125			
Pro	Phe	Val	Glu	Cys	Leu	Met	Phe	Gly	Ser	Leu	Ile	Ser	Ala	Thr	Asp
	130					135					140				
Pro	Val	Thr	Val	Leu	Ser	Ile	Phe	Gln	Glu	Leu	Gly	Ser	Asp	Val	Asn
145					150					155					160
Leu	Tyr	Ala	Leu	Val	Phe	Gly	Glu	Ser	Val	Leu	Asn	Asp	Ala	Asp	Glu
				165					170					175	
Ile	Val	Thr	Leu	Leu	Ile	Arg	Ser	Phe	Ser	Phe	Leu	Cys	Cys	Phe	Trp
			180					185					190		
Gln	Met	Ala	Ile	Ser	Leu	Tyr	Arg	Thr	Met	Ser	Leu	Val	Arg	Ser	His
		195					200					205			
Ser	Ser	Gly	Gln	Asn	Phe	Phe	Met	Val	Ile	Val	Arg	Phe	Leu	Glu	Thr
	210					215					220				
Phe	Val	Gly	Ser	Met	Ser	Ala	Ala	Met	Lys	Tyr	Phe	Ile	Leu	Met	Tyr
225					230					235					240
Ser	Leu	Leu	Leu	Ser	Val	Tyr	Arg	Thr	Trp	Ser	Ala	Val	Ser	Ser	Tyr
				245					250					255	
Phe	Phe	His	Ile	Ser	Arg	Asn	Lys	Thr	Leu	Leu	Phe	Tyr	Thr	Ser	Tyr
			260					265					270		
Val	Ser	Ile	Tyr	Phe	Thr	Leu	Ile	Glu	Ile	Val	Gln	Phe	Val	Met	Lys
		275					280					285			
His	Tyr	Thr	Tyr	Ser	Asn	Leu	Ser	Ala	Asn	Ser	Gln	Arg	Phe	Val	Ser
	290					295					300				
Ala	Phe	Phe	His	Leu	Ile	Ser	Ser	Leu	Ala	Glu	Thr	Phe	Val	Phe	Ile
305					310					315					320
Tyr	Met	Gly	Phe	Asp	Ile	Ala	Met	Glu	Lys	His	Ser	Trp	Ala	Ala	Asn
				325					330					335	
Val	Phe	Gly	Cys	Gly	Tyr	Leu	Val	Asn	Leu	Ala	Arg	Pro	Ala	His	Arg
			340					345					350		
Lys	Ile	Pro	Met	Thr	His	Gln	Lys	Ala	Leu	Trp	Tyr	Ser	Gly	Lys	Ile
		355					360					365			
Leu	Leu	Cys	Val	Pro	Leu	Ser	Ser	Tyr	Cys	Phe	Tyr	Ser	Ser	Val	Ile
	370					375					380				
Asn	Thr	Lys	Ile	Cys	Gly	Phe	Cys	Ile	Gly	Leu	Arg	Gly	Ala	Met	Ala
385					390					395					400
Phe	Ala	Leu	Ala	Leu	Gln	Ser	Val	His	Asp	Leu	Pro	Glu	Gly	His	Gly

Val	Ala	Gln	Ile	Thr	Val	Thr	Leu	Ser	Ala	Ser	Tyr	Phe	Ala	Tyr	Tyr	260	265	270
Thr	Ala	Gln	Glu	Trp	Ala	Gly	Val	Ser	Gly	Ile	Leu	Thr	Val	Met	Ile	275	280	285
Leu	Gly	Met	Phe	Phe	Ala	Ala	Phe	Ala	Arg	Thr	Ala	Phe	Lys	Gly	Asp	290	295	300
Ser	His	Gln	Ser	Leu	His	His	Phe	Trp	Tyr	Phe	Thr	Thr	Gln	Glu	Met	305	310	315
Ala	Ala	Tyr	Ile	Ala	Asn	Thr	Leu	Val	Phe	Met	Leu	Ser	Gly	Val	Ile	325	330	335
Ile	Ala	Glu	Ser	Val	Leu	Ser	Gly	Gln	Thr	Ile	Ser	Tyr	Lys	Ala	Ile	340	345	350
Lys	Trp	Lys	Phe	Ile	Ser	Gln	Phe	Arg	Tyr	Gly	Asn	Lys	Ala	Val	Leu	355	360	365
Gln	Phe	Leu	Phe	Leu	Thr	Gly	Gly	Ile	Val	Phe	Leu	Thr	Leu	Val	Val	370	375	380
Asn	Gly	Ser	Thr	Thr	Gln	Leu	Leu	Leu	His	Leu	Leu	Arg	Met	Asp	Thr	385	390	395
Leu	Thr	Ala	Thr	Lys	Lys	Arg	Ile	Leu	Glu	Tyr	Thr	Lys	Phe	Glu	Met	405	410	415
Met	Lys	Thr	Ala	Leu	Lys	Ala	Phe	Glu	Asn	Leu	Gly	Asp	Asp	Glu	Glu	420	425	430
Leu	Gly	Ser	Ala	Asp	Trp	Pro	Thr	Val	Ile	Arg	His	Ile	Ser	Ser	Leu	435	440	445
Lys	Asp	Leu	Glu	Gly	Arg	Gln	Val	Asn	Pro	His	Asp	Gly	Tyr	Glu	Ala	450	455	460
Gly	Ser	Leu	Asp	Pro	Thr	Asn	Ile	Met	Asp	Ile	Arg	Val	Gln	Ala	Ala	465	470	475
Tyr	Trp	Glu	Met	Leu	Asp	Asp	Gly	Arg	Ile	Thr	Gln	Cys	Thr	Ala	Asn	485	490	495
Val	Leu	Met	Gln	Ser	Val	Asp	Glu	Ala	Leu	Asp	Leu	Val	Ser	Thr	Ser	500	505	510
Ser	Leu	Ser	Asp	Trp	Arg	Gly	Leu	Glu	Pro	Arg	Val	His	Phe	Pro	Asn	515	520	525
Tyr	Tyr	Lys	Phe	Leu	Gln	Ser	Lys	Ile	Ile	Pro	His	Lys	Leu	Val	Thr	530	535	540
His	Leu	Ile	Val	Glu	Arg	Leu	Glu	Ser	Ala	Cys	Tyr	Ile	Ser	Ser	Ala	545	550	555
Phe	Leu	Arg	Ala	His	Arg	Ile	Ala	Arg	Gln	Gln	Leu	His	Ile	Phe	Leu	565	570	575
Gly	Asn	Ser	Asn	Ile	Ala	Ser	Thr	Val	Ile	Asn	Glu	Ser	Glu	Val	Glu	580	585	590
Gly	Glu	Glu	Ala	Lys	Gln	Phe	Leu	Glu	Asp	Val	Arg	Asp	Ser	Phe	Pro	595	600	605
Gln	Val	Leu	Ser	Val	Leu	Lys	Thr	Arg	Gln	Val	Thr	His	Tyr	Val	Leu	610	615	620
Asn	His	Leu	Asn	Gly	Tyr	Ile	Lys	Asn	Leu	Glu	Lys	Val	Gly	Leu	Leu	625	630	635
Glu	Gly	Lys	Glu	Val	Ser	His	Leu	His	Asp	Val	Val	Gln	Ser	Asp	Leu	645	650	655
Lys	Lys	Leu	Leu	Arg	His	Pro	Pro	Ser	Leu	Lys	Leu	Pro	Asn	Val	Asp	660	665	670
Asp	Leu	Ile	Thr	Ser	Asn	Pro	Leu	Leu	Lys	Asp	Arg	Ser	Ser	Phe	Arg	675	680	685
Ser	Leu	Ala	Ile	Gly	Glu	Thr	Asp	Ala								690	695	

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<400> 19

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Ala	Ile	Ala	Ser	Ser	Ser	Tyr	Ser	Ala	Glu	Asn	Asp	Ser	Ser	Pro	Val
			20					25					30		
Asp	Ala	Val	Ile	Phe	Ala	Gly	Thr	Ser	Leu	Val	Leu	Gly	Thr	Ala	Cys
		35					40					45			
Arg	Tyr	Leu	Phe	Asn	Gly	Thr	Arg	Val	Pro	Tyr	Thr	Val	Val	Leu	Leu
	50					55					60				
Val	Ile	Gly	Ile	Phe	Leu	Gly	Ser	Leu	Glu	Tyr	Gly	Thr	Lys	His	Asn
65					70					75				80	
Leu	Gly	Lys	Leu	Gly	His	Gly	Ile	Arg	Ile	Trp	Asn	Gly	Ile	Asn	Pro
				85					90					95	
Asp	Leu	Leu	Leu	Ala	Val	Phe	Leu	Pro	Val	Leu	Leu	Phe	Glu	Ser	Ser
			100					105					110		
Phe	Ser	Met	Asp	Val	His	Gln	Ile	Lys	Arg	Cys	Met	Gly	Gln	Met	Val
	115						120					125			
Leu	Leu	Ala	Gly	Pro	Gly	Val	Leu	Ile	Ser	Thr	Phe	Cys	Leu	Gly	Ala
	130					135					140				
Leu	Ile	Lys	Leu	Thr	Phe	Pro	Tyr	Asn	Trp	Asp	Trp	Lys	Thr	Ser	Leu
145					150					155					160
Leu	Leu	Gly	Gly	Leu	Leu	Gly	Ala	Thr	Asp	Pro	Val	Ala	Val	Val	Ala
				165					170					175	
Leu	Leu	Lys	Glu	Leu	Gly	Ala	Ser	Lys	Lys	Met	Thr	Thr	Leu	Ile	Asp
		180						185					190		
Gly	Glu	Ser	Leu	Met	Asn	Asp	Gly	Val	Ser	Val	Val	Val	Phe	Gln	Leu
	195						200					205			
Phe	Phe	Lys	Met	Val	Met	Gly	His	Asn	Ser	Asp	Trp	Gly	Ser	Ile	Ile
	210					215					220				
Lys	Phe	Leu	Val	Gln	Asn	Ser	Phe	Gly	Ala	Val	Gly	Ile	Gly	Leu	Ala
225					230					235					240
Phe	Gly	Ile	Ala	Ser	Val	Phe	Trp	Leu	Lys	Phe	Ile	Phe	Asn	Asp	Thr
				245					250					255	
Val	Ala	Gln	Ile	Thr	Val	Thr	Leu	Ser	Ala	Ser	Tyr	Phe	Ala	Tyr	Tyr
		260						265					270		
Thr	Ala	Gln	Glu	Trp	Ala	Gly	Val	Ser	Gly	Ile	Leu	Thr	Val	Met	Ile
		275					280						285		
Leu	Gly	Met	Phe	Phe	Ala	Ala	Phe	Ala	Arg	Thr	Ala	Phe	Lys	Gly	Asp
	290					295					300				
Ser	His	Gln	Ser	Leu	His	His	Phe	Trp	Tyr	Phe	Thr	Thr	Gln	Glu	Met
305					310					315					320
Ala	Ala	Tyr	Ile	Ala	Asn	Thr	Leu	Val	Phe	Met	Leu	Ser	Gly	Val	Ile
				325					330					335	
Ile	Ala	Glu	Ser	Val	Leu	Ser	Gly	Gln	Thr	Ile	Ser	Tyr	Lys	Ala	Ile
			340					345					350		
Lys	Trp	Lys	Phe	Ile	Ser	Gln	Phe	Arg	Tyr	Gly	Asn	Lys	Ala	Val	Leu
	355						360					365			
Gln	Phe	Leu	Phe	Leu	Thr	Gly	Gly	Ile	Val	Phe	Leu	Thr	Leu	Val	Val
	370					375					380				
Asn	Gly	Ser	Thr	Thr	Gln	Leu	Leu	Leu	His	Leu	Leu	Arg	Met	Asp	Thr
385					390					395					400

Leu Thr Ala Thr Lys Lys Arg Ile Leu Glu Tyr Thr Lys Phe Glu Met
 405 410 415
 Met Lys Thr Ala Leu Lys Ala Phe Glu Asn Leu Gly Asp Asp Glu Glu
 420 425 430
 Leu Gly Ser Ala Asp Trp Pro Thr Val Ile Arg His Ile Ser Ser Leu
 435 440 445
 Lys Asp Leu Glu Gly Arg Gln Val Asn Pro His Asp Gly Tyr Glu Ala
 450 455 460
 Gly Ser Leu Asp Pro Thr Asn Ile Met Asp Ile Arg Val Gln Ala Ala
 465 470 475 480
 Tyr Trp Glu Met Leu Asp Asp Gly Arg Ile Thr Gln Cys Thr Ala Asn
 485 490 495
 Val Leu Met Gln Ser Val Asp Glu Ala Leu Asp Leu Val Ser Thr Ser
 500 505 510
 Ser Leu Ser Asp Trp Arg Gly Leu Glu Pro Arg Val His Phe Pro Asn
 515 520 525
 Tyr Tyr Lys Phe Leu Gln Ser Lys Ile Ile Pro His Lys Leu Val Thr
 530 535 540
 His Leu Ile Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ser Ala
 545 550 555 560
 Phe Leu Arg Ala His Arg Ile Ala Arg Gln Gln Leu His Ile Phe Leu
 565 570 575
 Gly Asn Ser Asn Ile Ala Ser Thr Val Ile Asn Glu Ser Glu Val Glu
 580 585 590
 Gly Glu Glu Ala Lys Gln Phe Leu Glu Asp Val Arg Asp Ser Phe Pro
 595 600 605
 Gln Val Leu Ser Val Leu Lys Thr Arg Gln Val Thr His Tyr Val Leu
 610 615 620
 Asn His Leu Asn Gly Tyr Ile Lys Asn Leu Glu Lys Val Gly Leu Leu
 625 630 635 640
 Glu Gly Lys Glu Val Ser His Leu His Asp Val Val Gln Ser Asp Leu
 645 650 655
 Lys Lys Leu Leu Arg His Pro Pro Ser Leu Lys Leu Pro Asn Val Asp
 660 665 670
 Asp Leu Ile Thr Ser Asn Pro Leu Leu Lys Asp Arg Ser Ser Phe Arg
 675 680 685
 Ser Leu Ala Ile Gly Glu Thr Asp Ala
 690 695

<210> 20

<211> 534

<212> PRT

<213> *Lycopersicon esculentum*

<400> 20

Met Gly Leu Asp Ala Val Ala Arg Leu Gly Val Ser Ile Leu Ser Asp
 1 5 10 15
 Gly Asp Gln Val Ser Val Asp Ser Ile Thr Leu Phe Val Ala Leu Leu
 20 25 30
 Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Ser Arg Trp Ile
 35 40 45
 Asn Asp Ser Ile Thr Thr Leu Val Ile Gly Leu Ser Thr Gly Gly Ile
 50 55 60
 Ile Leu Leu Thr Thr Lys Gly Lys Ser Ser His Leu Leu Glu Phe Asp
 65 70 75 80
 Glu Gln Leu Phe Phe Ile Tyr Val Leu Pro Pro Ile Ile Phe Asn Ala

															85						90						95		
Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Val	Thr	Ile														
															100			105			110								
Met	Leu	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Phe	Ser	Ile	Ile	Ser														
															115			120			125								
Phe	Gly	Ala	Lys	Glu	Leu	Leu	Gly	Lys	Leu	Asp	Ile	Gly	Phe	Leu	Glu														
															130			135			140								
Leu	Arg	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	Thr	Asp	Ser														
145															150			155			160								
Val	Cys	Thr	Leu	Gln	Ala	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Arg	Leu	Tyr														
															165			170			175								
Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	Val														
															180			185			190								
Leu	Phe	Asn	Ala	Ile	Gln	Lys	Leu	Asp	Leu	Ser	His	Ile	Asn	Ser	Arg														
															195			200			205								
Ala	Ala	Leu	Val	Phe	Thr	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Leu	Ala	Ser														
															210			215			220								
Thr	Phe	Leu	Gly	Val	Leu	Ile	Gly	Leu	Leu	Ser	Ala	Tyr	Leu	Ile	Lys														
225															230			235			240								
Lys	Ile	Tyr	Leu	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	Leu	Met														
															245			250			255								
Ile	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Val	Met	Ala	Glu	Leu	Phe	Asp	Leu														
															260			265			270								
Ser	Gly	Ile	Leu	Thr	Val	Phe	Ile	Cys	Gly	Ile	Val	Met	Ser	His	Tyr														
															275			280			285								
Thr	Trp	His	Asn	Val	Thr	Phe	Asn	Ser	Lys	Val	Thr	Thr	Arg	His	Ala														
															290			295			300								
Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Ile	Phe	Ile	Phe	Leu	Tyr	Val														
305															310			315			320								
Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Arg	Phe	Val	Lys	Asp	Ser														
															325			330			335								
Pro	Gly	Lys	Ser	Val	Gly	Val	Ser	Ala	Ala	Leu	Leu	Gly	Leu	Val	Leu														
															340			345			350								
Val	Gly	Arg	Ala	Cys	Phe	Val	Phe	Pro	Leu	Ser	Leu	Phe	Ser	Asn	Cys														
															355			360			365								
Leu	Lys	Arg	Ser	Glu	His	Asp	Lys	Phe	Gly	Leu	Lys	Leu	Gln	Val	Thr														
															370			375			380								
Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ser	Val	Ser	Met	Ala	Leu	Ala														
385															390			395			400								
Tyr	Asn	Gln	Phe	Thr	Arg	Phe	Gly	His	Thr	Gln	Gln	Pro	Gly	Asn	Ala														
															405			410			415								
Val	Met	Ile	Thr	Ser	Thr	Ile	Thr	Ile	Val	Leu	Phe	Ser	Thr	Val	Val														
															420			425			430								
Phe	Gly	Leu	Ile	Thr	Lys	Pro	Leu	Val	Arg	Phe	Leu	Leu	Pro	Ser	Ser														
															435			440			445								
Gln	Gly	Phe	Asn	Asn	Leu	Ile	Ser	Ser	Glu	Gln	Ser	Phe	Ala	Arg	Pro														
															450			455			460								
Leu	Leu	Thr	Asn	Glu	Gln	Glu	Leu	Glu	Leu	Glu	Met	Gly	Asn	Val	Asp														
465															470			475			480								
Pro	Val	Arg	Pro	Ser	Gly	Leu	Ser	Ile	Leu	Leu	Lys	Glu	Pro																

<210> 21
 <211> 531
 <212> PRT
 <213> Lycopersicon esculentum

<400> 21
 Met Glu Asp His Leu Gln Ile Ser Pro Ala Gly Ala Lys Ala Ile Pro
 1 5 10 15
 Gly Lys Glu Gln Ala Ala Gly Tyr Gly Ile Leu Leu Gln Ile Met
 20 25 30
 Met Leu Val Leu Ser Phe Val Ile Gly His Val Leu Arg Arg Arg His
 35 40 45
 Phe Tyr Tyr Ile Pro Glu Ala Ser Ala Ser Leu Leu Ile Gly Leu Ile
 50 55 60
 Val Gly Gly Leu Ala Asn Val Ser Asp Thr Glu Thr Ser Ile Arg Ala
 65 70 75 80
 Trp Phe Asn Phe His Glu Glu Phe Phe Phe Leu Phe Leu Leu Pro Pro
 85 90 95
 Ile Ile Phe Gln Ser Gly Phe Ser Leu Ser Pro Lys Pro Phe Phe Ser
 100 105 110
 Asn Phe Gly Ala Ile Ile Thr Phe Ala Ile Leu Gly Thr Phe Ile Ala
 115 120 125
 Ser Phe Val Thr Gly Ile Leu Val Tyr Leu Gly Gly Val Thr Tyr Leu
 130 135 140
 Met Tyr Arg Leu Pro Phe Val Glu Cys Leu Met Phe Gly Ala Leu Ile
 145 150 155 160
 Ser Ala Thr Asp Pro Val Thr Val Leu Ser Ile Phe Gln Glu Leu Gly
 165 170 175
 Thr Asp Val Asn Leu Tyr Ala Leu Val Phe Gly Glu Ser Val Leu Asn
 180 185 190
 Asp Ala Met Ala Ile Ser Leu Tyr Arg Thr Met Ser Leu Val Arg Ser
 195 200 205
 His Met Ser Thr Asp Gln Asn Tyr Phe Met Ile Thr Ile Arg Phe Val
 210 215 220
 Glu Thr Phe Met Gly Ser Leu Ser Ala Gly Val Gly Val Gly Phe Val
 225 230 235 240
 Ser Ala Leu Leu Phe Lys Tyr Ala Gly Leu Asp Ile Asp Asn Leu Gln
 245 250 255
 Asn Leu Glu Ser Cys Leu Phe Val Leu Phe Pro Tyr Phe Ser Tyr Met
 260 265 270
 Leu Ala Glu Gly Leu Gly Leu Ser Gly Ile Val Ser Ile Leu Phe Thr
 275 280 285
 Gly Val Val Met Lys Arg Tyr Thr Tyr Pro Asn Leu Ser Glu Ser Ser
 290 295 300
 Gln Arg Phe Val Ser Ala Phe Phe His Leu Ile Ser Ser Leu Ala Glu
 305 310 315 320
 Thr Phe Val Phe Ile Tyr Met Gly Phe Asp Ile Ala Met Glu Lys His
 325 330 335
 Ser Trp Ser His Val Gly Phe Ile Phe Phe Ser Ile Leu Phe Ile Val
 340 345 350
 Ile Ala Arg Ala Ala Asn Val Phe Gly Cys Ala Tyr Leu Val Asn Leu
 355 360 365
 Val Arg Pro Pro His Gln Lys Ile Pro Ala Lys His Gln Lys Ala Leu
 370 375 380
 Trp Tyr Ser Gly Leu Arg Gly Ala Met Ala Phe Ala Leu Ala Leu Gln

385					390					395				400	
Pro	Val	His	Asp	Leu	Pro	Glu	Gly	His	Gly	Gln	Ala	Ile	Phe	Thr	Ala
				405					410					415	
Thr	Thr	Ala	Ile	Val	Val	Leu	Thr	Val	Leu	Ile	Ile	Gly	Gly	Ser	Ala
			420					425					430		
Gly	Thr	Met	Leu	Glu	Ala	Leu	Glu	Val	Val	Gly	Asp	Gly	Gln	Ser	Gly
		435				440				445					
Ser	Met	Asp	Glu	Thr	Phe	Glu	Gly	Asn	Asn	Gly	Tyr	Ile	Ala	Pro	Ser
	450				455					460					
Tyr	Arg	Asp	Glu	Ser	Tyr	Asp	Gly	Glu	Pro	Ser	Ser	Gly	Asn	Arg	Phe
465					470					475				480	
Arg	Met	Lys	Leu	Lys	Glu	Phe	His	Lys	Ser	Thr	Thr	Ser	Phe	Ser	Ala
				485				490						495	
Leu	Asp	Lys	Asn	Tyr	Leu	Thr	Pro	Phe	Phe	Thr	Thr	Gln	Gly	Gly	Asp
			500					505					510		
Glu	Asp	Glu	Asp	Glu	Pro	Ile	Met	His	Ser	Ser	Arg	Arg	Ala	Gly	Tyr
		515					520					525			
Asp	Gly	His													
	530														

<210> 22
 <211> 535
 <212> PRT
 <213> Oryza sativa

<400> 22															
Met	Gly	Met	Glu	Val	Ala	Ala	Ala	Arg	Leu	Gly	Ala	Leu	Tyr	Thr	Thr
1				5					10					15	
Ser	Asp	Tyr	Ala	Ser	Val	Val	Ser	Ile	Asn	Leu	Phe	Val	Ala	Leu	Leu
			20					25					30		
Cys	Ala	Cys	Ile	Val	Leu	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Val
		35					40					45			
Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Leu	Cys	Thr	Gly	Val	Val
	50					55					60				
Ile	Leu	Leu	Met	Thr	Lys	Gly	Lys	Ser	Ser	His	Leu	Phe	Val	Phe	Ser
65					70					75				80	
Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala
				85					90					95	
Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Met	Thr	Ile
			100					105					110		
Thr	Leu	Phe	Gly	Ala	Val	Gly	Thr	Met	Ile	Ser	Phe	Phe	Thr	Ile	Ser
			115				120						125		
Ile	Ala	Ala	Ile	Ala	Ile	Phe	Ser	Arg	Met	Asn	Ile	Gly	Thr	Leu	Asp
	130					135					140				
Val	Gly	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	Thr	Asp	Ser
145					150					155				160	
Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Phe	Leu	Tyr
				165					170					175	
Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Ile	Val
			180					185					190		
Leu	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Leu	Val	His	Ile	Asp	Ala	Ala
		195				200						205			
Val	Val	Leu	Lys	Phe	Leu	Gly	Asn	Phe	Phe	Tyr	Leu	Phe	Leu	Ser	Ser
	210					215					220				
Thr	Phe	Leu	Gly	Val	Phe	Ala	Gly	Leu	Leu	Ser	Ala	Tyr	Ile	Ile	Lys
225					230					235					240

Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met
 245 250 255
 Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Leu Asp Leu
 260 265 270
 Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr
 275 280 285
 Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His Ala
 290 295 300
 Phe Ala Thr Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe Leu Tyr Val
 305 310 315 320
 Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Glu Phe Ala Ser Asp Arg
 325 330 335
 Pro Gly Lys Ser Ile Gly Ile Ser Ser Ile Leu Leu Gly Leu Val Leu
 340 345 350
 Ile Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu
 355 360 365
 Thr Lys Lys Ala Pro Asn Glu Lys Ile Thr Trp Arg Gln Gln Val Val
 370 375 380
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala
 385 390 395 400
 Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Gln Leu His Gly Asn Ala
 405 410 415
 Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Met Val
 420 425 430
 Phe Gly Met Met Thr Lys Pro Leu Ile Arg Leu Leu Leu Pro Ala Ser
 435 440 445
 Gly His Pro Val Thr Ser Glu Pro Ser Ser Pro Lys Ser Leu His Ser
 450 455 460
 Pro Leu Leu Thr Ser Met Gln Gly Ser Asp Leu Glu Ser Thr Thr Asn
 465 470 475 480
 Ile Val Arg Pro Ser Ser Leu Arg Met Leu Leu Thr Lys Pro Thr His
 485 490 495
 Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu Met Arg Pro
 500 505 510
 Met Phe Gly Gly Arg Gly Phe Val Pro Phe Ser Pro Gly Ser Pro Thr
 515 520 525
 Glu Gln Ser His Gly Gly Arg
 530 535

<210> 23

<211> 553

<212> PRT

<213> Nierembergia caerulea

<400> 23

Met Ala Phe Asp Phe Gly Thr Leu Leu Gly Lys Met Asn Asn Leu Thr
 1 5 10 15
 Thr Ser Asp His Gln Ser Val Val Ser Val Asn Leu Phe Val Ala Leu
 20 25 30
 Ile Cys Ala Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp
 35 40 45
 Met Asn Glu Ser Ile Thr Ala Leu Val Ile Gly Ser Cys Thr Gly Val
 50 55 60
 Ile Ile Leu Leu Ile Ser Gly Gly Lys Asn Ser His Ile Leu Val Phe
 65 70 75 80
 Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn

				85				90				95				
Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Ser	Phe	Phe	Arg	Asn	Phe	Ser	Thr	
			100					105					110			
Ile	Met	Leu	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Phe	Ile	Ile	Ile	
		115					120					125				
Ser	Ala	Gly	Ala	Ile	Gly	Ile	Phe	Lys	Lys	Met	Asp	Ile	Gly	His	Leu	
	130					135					140					
Glu	Ile	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr	Asp	
145					150					155					160	
Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Glu	Glu	Thr	Pro	Leu	Leu	
				165					170					175		
Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	
		180						185					190			
Val	Leu	Phe	Asn	Ala	Val	Gln	Asn	Phe	Asp	Leu	Ser	His	Ile	Ser	Thr	
	195						200					205				
Gly	Lys	Ala	Leu	Gln	Leu	Ile	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ala	Ser	
	210					215					220					
Ser	Thr	Phe	Leu	Gly	Val	Ala	Val	Gly	Leu	Leu	Ser	Ala	Phe	Ile	Ile	
225					230						235				240	
Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	Ile	
				245					250					255		
Met	Ile	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Tyr	
		260						265					270			
Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	Ser	His	
	275						280					285				
Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys	His	
	290					295					300					
Thr	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Ile	Phe	Ile	Phe	Leu	Tyr	
305					310					315					320	
Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Val	Ser	Asp	
				325					330					335		
Ser	Pro	Gly	Thr	Ser	Ile	Lys	Val	Ser	Ser	Ile	Leu	Leu	Gly	Leu	Val	
		340						345					350			
Leu	Val	Gly	Arg	Gly	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	
	355						360					365				
Leu	Thr	Lys	Lys	Asn	Pro	Glu	Asp	Lys	Ile	Ser	Phe	Asn	Gln	Gln	Val	
	370					375					380					
Thr	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu	
385					390					395					400	
Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Gly	Gly	His	Thr	Gln	Leu	Arg	Ala	Asn	
				405					410					415		
Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	Val	
			420					425					430			
Val	Phe	Gly	Leu	Met	Thr	Lys	Pro	Leu	Ile	Leu	Leu	Leu	Leu	Pro	Ser	
	435						440					445				
Gln	Lys	His	Leu	Ile	Arg	Met	Ile	Ser	Ser	Glu	Pro	Met	Thr	Pro	Lys	
	450					455					460					
Ser	Phe	Ile	Val	Pro	Leu	Leu	Asp	Ser	Thr	Gln	Asp	Ser	Glu	Ala	Asp	
465					470					475					480	
Leu	Gly	Arg	His	Val	Pro	Arg	Pro	His	Ser	Leu	Arg	Met	Leu	Leu	Ser	
				485					490					495		
Thr	Pro	Ser	His	Thr	Val	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asn	Ala	
		500						505					510			
Phe	Met	Arg	Pro	Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	
	515						520					525				
Gly	Ser	Pro	Thr	Glu	Pro	Val	Glu	Pro	Thr	Glu	Pro	Arg	Pro	Ala	Glu	
	530					535					540					

Ser Arg Pro Thr Glu Pro Thr Asp Glu
545 550

<210> 24
<211> 542
<212> PRT
<213> Citrus x paradisi

<400> 24
Met Asp Gln Ala Ile Ser Ser Val Val Arg Lys Leu Gln Met Val Asn
1 5 10 15
Thr Ser Asp His Asn Ser Val Val Ser Ile Asn Ile Phe Val Ala Leu
20 25 30
Pro Cys Ala Ser Ile Val Ile Gly His Leu Leu Glu Glu Ser Arg Trp
35 40 45
Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Val Cys Ala Gly Val
50 55 60
Ile Ile Leu Leu Thr Thr Gly Gly Lys Ser Ser His Leu Phe Val Phe
65 70 75 80
Ser Glu Asp Leu Phe Phe Ile Tyr Val Leu Pro Pro Ile Ile Phe Asn
85 90 95
Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile Thr
100 105 110
Ile Met Leu Phe Gly Ala Ile Gly Thr Leu Val Ser Cys Thr Ile Ile
115 120 125
Ser Leu Gly Val Ile Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Leu
130 135 140
Asp Ile Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp
145 150 155 160
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Asp Thr Pro Leu Leu
165 170 175
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val
180 185 190
Val Leu Phe Asn Ala Ile Gln Ser Phe Asp Leu Thr His Ile Asn Thr
195 200 205
Arg Ser Ala Phe Gln Phe Ile Gly Asn Phe Leu Tyr Leu Phe Phe Thr
210 215 220
Ser Thr Leu Leu Gly Val Ile Gly Gly Leu Leu Ser Ala Tyr Val Ile
225 230 235 240
Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Ile
245 250 255
Met Val Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Tyr
260 265 270
Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His
275 280 285
Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His
290 295 300
Thr Phe Ala Thr Leu Ser Phe Val Ala Glu Ile Phe Thr Phe Leu Tyr
305 310 315 320
Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Lys Gly
325 330 335
Ser Pro Gly Thr Ser Val Ala Ala Ser Ala Met Leu Met Gly Leu Ile
340 345 350
Met Ala Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Thr Asn
355 360 365
Leu Ala Lys Lys Ser Pro Thr Glu Lys Ile Ser Ile Lys Gln Gln Val

370		375		380
Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu				
385		390		395
Ala Tyr Asn Gln Phe Thr Arg Ser Gly His Thr Gln Leu Arg Glu Asn				400
	405		410	415
Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Val				
	420		425	430
Val Phe Gly Leu Met Thr Glu Pro Leu Ile Arg Leu Leu Leu Pro His				
	435		440	445
Pro Lys His Thr Thr Asn His Ile Leu Ser Asp Pro Ser Thr Pro Lys				
	450		455	460
Ser Leu Ser Gln Pro Leu Leu Glu Glu Gly Gln Gln Asp Ser Tyr Ala				
465		470		475
Asp Leu Val Gly Pro Thr Val Pro Arg Pro Gly Ser Leu Arg Ala Leu				480
	485		490	495
Leu Thr Thr Pro Thr His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp				
	500		505	510
Asp Ala Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Ala Pro Phe				
	515		520	525
Val Pro Gly Ser Pro Thr Glu Arg Ser Val Arg Gly Gly Gln				
530		535		540

<210> 25
 <211> 546
 <212> PRT
 <213> Triticum aestivum

<400> 25

Met Gly Leu Asp Leu Gly Ala Leu Ala Leu Lys Tyr Thr Gly Leu Ala				
1	5	10	15	
Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu				
	20	25	30	
Leu Cys Gly Cys Ile Val Phe Gly His Leu Leu Glu Gly Asn Arg Trp				
	35	40	45	
Val Asn Glu Ser Thr Thr Ala Leu Val Leu Gly Leu Ile Thr Gly Gly				
	50	55	60	
Val Ile Leu Ile Cys Thr Lys Gly Val Asn Ser Arg Ile Leu Ile Phe				
65	70	75	80	
Ser Glu Asp Ile Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn				
	85	90	95	
Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ala Thr				
	100	105	110	
Ile Ile Leu Phe Gly Ala Ala Gly Thr Leu Ile Ser Phe Val Ile Ile				
	115	120	125	
Thr Phe Gly Ala Met Gly Leu Phe Ser Lys Leu Asp Val Gly Pro Leu				
	130	135	140	
Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp				
145	150	155	160	
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Ala Pro Leu Leu				
	165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val				
	180	185	190	
Val Leu Phe Asn Ala Ile Gln Asn Ile Asp Ile Asn His Phe Asp Val				
	195	200	205	
Phe Val Leu Leu Gln Phe Ile Gly Lys Phe Leu Tyr Leu Phe Phe Thr				
210		215		220

Ser Thr Val Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile
 225 230 235 240
 Lys Lys Leu Cys Phe Ala Arg His Ser Thr Asp Arg Glu Val Ala Ile
 245 250 255
 Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ser Met Leu Leu Asp
 260 265 270
 Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His
 275 280 285
 Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His
 290 295 300
 Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Leu Phe Leu Tyr
 305 310 315 320
 Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Lys Leu Ala Ser Ser
 325 330 335
 Ser Pro Lys Lys Pro Ile Ala Leu Ser Ala Val Ile Leu Gly Leu Val
 340 345 350
 Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Ser Lys Lys Glu Ser His Pro Lys Ile Ser Phe Asn Gln Gln Val
 370 375 380
 Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu
 385 390 395 400
 Ala Tyr Asn Lys Phe Thr Thr Ser Gly His Thr Ala Val Arg Val Asn
 405 410 415
 Ala Val Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr Met
 420 425 430
 Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro Pro
 435 440 445
 Arg Pro Gly Thr Ala Ala Asp Ile Ser Ser Gln Ser Phe Leu Asp Pro
 450 455 460
 Leu Thr Ala Ser Leu Leu Gly Ser Asp Phe Asp Val Gly Gln Leu Thr
 465 470 475 480
 Pro Gln Thr Asn Leu Gln Tyr Leu Leu Thr Met Pro Thr Arg Ser Val
 485 490 495
 His Arg Val Trp Arg Lys Phe Asp Asp Lys Phe Met Arg Pro Met Phe
 500 505 510
 Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Ile Glu Arg
 515 520 525
 Ser Val His Gly Pro Gly Leu Leu Gly Thr Val Thr Glu Ala Glu Asp
 530 535 540
 Arg Ser
 545

<210> 26
 <211> 538
 <212> PRT
 <213> Triticum aestivum

<400> 26
 Met Gly Tyr Gln Val Val Ala Ala Gln Leu Ala Arg Leu Ser Gly Ala
 1 5 10 15
 Leu Gly Thr Ser Asp His Ala Ser Val Val Ser Ile Thr Leu Phe Val
 20 25 30
 Ala Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn
 35 40 45
 Arg Trp Leu Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr

50						55					60					
Gly	Val	Val	Ile	Leu	Met	Thr	Thr	Lys	Gly	Lys	Ser	Ser	His	Val	Leu	
65					70					75					80	
Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	
				85					90					95		
Phe	Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	
			100					105					110			
Met	Ala	Ile	Thr	Leu	Phe	Gly	Ala	Val	Gly	Thr	Met	Met	Ser	Phe	Phe	
		115					120					125				
Thr	Ile	Ser	Leu	Ala	Ala	Ile	Ala	Ile	Phe	Ser	Arg	Met	Asn	Ile	Gly	
	130					135					140					
Thr	Leu	Asp	Val	Ser	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	
145					150					155					160	
Thr	Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	
				165					170					175		
Phe	Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	
		180					185					190				
Ser	Val	Val	Leu	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Pro	Asn	Gln	Ile	
	195					200					205					
Asp	Ala	Ile	Val	Ile	Leu	Lys	Phe	Leu	Gly	Asn	Phe	Cys	Tyr	Leu	Phe	
	210					215					220					
Val	Ser	Ser	Thr	Phe	Leu	Gly	Val	Phe	Thr	Gly	Leu	Leu	Ser	Ala	Tyr	
225					230					235					240	
Val	Ile	Lys	Lys	Leu	Tyr	Ile	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	
				245				250						255		
Ala	Leu	Val	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	
		260						265				270				
Leu	Asp	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	
	275					280					285					
Ser	His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	
	290					295					300					
Lys	His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Leu	Phe	
305					310					315					320	
Leu	Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Ala	
				325				330						335		
Ser	Asp	Ser	Pro	Gly	Lys	Ser	Ile	Gly	Ile	Ser	Ser	Ile	Leu	Leu	Gly	
		340						345					350			
Leu	Val	Leu	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	
	355					360					365					
Ser	Asn	Leu	Thr	Lys	Lys	Thr	Glu	Leu	Glu	Lys	Ile	Ser	Trp	Arg	Gln	
	370					375					380					
Gln	Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile	
385					390					395					400	
Ala	Leu	Ala	Tyr	Asn	Lys	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	His	
				405				410						415		
Gly	Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	
		420						425					430			
Thr	Met	Leu	Phe	Gly	Ile	Leu	Thr	Lys	Pro	Leu	Ile	Arg	Phe	Leu	Leu	
	435					440						445				
Pro	Ala	Ser	Ser	Asn	Gly	Ala	Ala	Ser	Asp	Pro	Ala	Ser	Pro	Lys	Ser	
	450				455					460						
Leu	His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Ala	
465					470					475					480	
Pro	Leu	Pro	Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Met	Leu	Ile	Thr	Lys	
				485				490						495		
Pro	Thr	His	Thr	Ile	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Leu	
			500					505					510			

Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Tyr Ser Pro Gly
515 520 525
Ser Pro Thr Asp Pro Asn Val Leu Val Glu
530 535

<210> 27
<211> 546
<212> PRT
<213> Triticum aestivum

<400> 27
Met Gly Leu Asp Leu Gly Ala Leu Ala Leu Lys Tyr Thr Gly Leu Ala
1 5 10 15
Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu
20 25 30
Leu Cys Gly Cys Ile Val Phe Gly His Leu Leu Gly Gly Asn Arg Trp
35 40 45
Val Asn Glu Ser Thr Ala Ala Leu Val Leu Gly Leu Ile Thr Gly Gly
50 55 60
Val Ile Leu Ile Cys Thr Lys Gly Val Asn Ser Arg Ile Leu Ile Phe
65 70 75 80
Ser Glu Asp Ile Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn
85 90 95
Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ala Thr
100 105 110
Ile Ile Leu Phe Gly Ala Ala Gly Thr Leu Ile Ser Phe Val Ile Ile
115 120 125
Thr Phe Gly Ala Met Gly Leu Phe Ser Lys Leu Asp Val Gly Pro Leu
130 135 140
Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp
145 150 155 160
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Ala Pro Leu Leu
165 170 175
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val
180 185 190
Val Leu Phe Asn Ala Ile Gln Asn Ile Asp Ile Asn His Phe Asp Val
195 200 205
Phe Gly Leu Leu Gln Phe Ile Gly Lys Phe Leu Tyr Leu Phe Phe Thr
210 215 220
Ser Thr Val Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile
225 230 235 240
Lys Lys Leu Cys Phe Ala Arg His Ser Thr Asp Arg Glu Val Ala Ile
245 250 255
Met Ile Leu Met Ala Tyr Leu Ser Cys Met Leu Ser Met Leu Leu Asp
260 265 270
Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His
275 280 285
Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His
290 295 300
Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Leu Phe Leu Tyr
305 310 315 320
Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Lys Leu Ala Ser Ser
325 330 335
Ser Pro Lys Lys Pro Ile Ala Leu Ser Ala Val Ile Leu Gly Leu Val
340 345 350
Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn

Val	Val	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Ile	Thr	His	Ile	Asp	Ala
		195					200					205			
Glu	Val	Val	Phe	His	Leu	Leu	Gly	Asn	Phe	Phe	Tyr	Leu	Phe	Leu	Leu
		210				215					220				
Ser	Thr	Val	Leu	Gly	Val	Ala	Thr	Gly	Leu	Ile	Ser	Ala	Leu	Val	Ile
225					230					235					240
Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val	Ala	Leu
				245					250					255	
Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Ala
			260					265					270		
Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Gly	Cys	Ile	Val	Met	Ser	His
		275					280					285			
Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Ile	Thr	Thr	Lys	His
		290				295					300				
Ala	Phe	Ala	Thr	Leu	Ser	Phe	Leu	Ala	Glu	Thr	Phe	Leu	Phe	Leu	Tyr
305					310					315					320
Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Asp	Lys	Trp	Arg	Ser	Val	Ser	Asp
				325					330					335	
Thr	Pro	Gly	Lys	Ser	Leu	Ala	Ile	Ser	Ser	Ile	Leu	Met	Gly	Leu	Val
			340					345					350		
Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn
		355					360					365			
Leu	Ala	Lys	Lys	Thr	Glu	His	Glu	Lys	Ile	Ser	Trp	Lys	Gln	Gln	Val
		370				375					380				
Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu
385					390					395					400
Ala	Tyr	Lys	Lys	Phe	Thr	Arg	Ala	Gly	His	Thr	Gln	Val	Arg	Gly	Asn
				405					410					415	
Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Ile	Val	Val	Leu	Phe	Ser	Thr	Met
			420					425					430		
Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Asn	Leu	Leu	Ile	Pro	His
		435					440						445		
Arg	Asn	Ala	Thr	Ser	Met	Leu	Ser	Asp	Asp	Ser	Ser	Pro	Lys	Ser	Leu
		450				455					460				
His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Glu	Pro
465					470					475					480
Thr	Asn	Ile	Pro	Arg	Pro	Ser	Ser	Ile	Arg	Gly	Glu	Phe	Leu	Thr	Met
				485					490					495	
Thr	Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Phe	Met
			500					505					510		
Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser
		515					520					525			
Pro	Thr	Glu	Arg	Asn	Pro	Pro	Asp	Leu	Ser	Lys	Ala				
		530				535					540				

<210> 29
 <211> 540
 <212> PRT
 <213> Zea mays

<400> 29
 Met Gly Leu Gly Val Asp Ala Glu Thr Val Arg Leu Gly Val Leu Ser
 1 5 10 15
 Ser Thr Ser Asp His Ala Ser Val Val Ser Asn Asn Phe Phe Val Ala
 20 25 30
 Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg

Thr	Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Lys	Phe	Met
			500					505					510		
Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser
		515					520					525			
Pro	Thr	Glu	Arg	Asn	Pro	His	Asp	Leu	Ser	Lys	Pro				
	530					535					540				

<210> 30
 <211> 539
 <212> PRT
 <213> Zea mays

<400> 30

Met	Ser	Ile	Gly	Leu	Thr	Ala	Glu	Thr	Val	Thr	Asn	Lys	Leu	Ala	Ser
1				5					10					15	
Ala	Glu	His	Pro	Gln	Val	Val	Pro	Asn	Ser	Val	Phe	Ile	Ala	Leu	Leu
			20					25					30		
Cys	Leu	Cys	Leu	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Val
		35					40					45			
Asn	Glu	Ser	Ile	Thr	Ala	Ile	Leu	Val	Gly	Ala	Ala	Thr	Gly	Thr	Val
		50				55					60				
Ile	Leu	Leu	Ile	Ser	Lys	Gly	Lys	Ser	Ser	His	Ile	Leu	Val	Phe	Asp
65					70					75				80	
Glu	Glu	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala
			85						90					95	
Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ile	Thr	Ile
			100					105					110		
Ile	Leu	Phe	Gly	Ala	Ile	Gly	Thr	Leu	Ile	Ser	Phe	Val	Ile	Ile	Ser
		115				120						125			
Leu	Gly	Ala	Met	Gly	Leu	Phe	Lys	Lys	Leu	Asp	Val	Gly	Pro	Leu	Glu
		130				135				140					
Leu	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala	Thr	Asp	Ser
145					150					155				160	
Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu	Leu	Tyr
			165						170					175	
Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	Val
		180						185					190		
Leu	Phe	Asn	Ala	Val	Gln	Lys	Ile	Asp	Phe	Glu	His	Leu	Thr	Gly	Glu
		195				200						205			
Val	Ala	Leu	Gln	Val	Phe	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ser	Thr	Ser
		210				215					220				
Thr	Val	Leu	Gly	Ile	Ala	Thr	Gly	Leu	Ile	Thr	Ala	Phe	Val	Leu	Lys
225				230						235					240
Thr	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Thr	Arg	Glu	Leu	Ala	Ile	Met
			245						250					255	
Val	Leu	Met	Ala	Tyr	Leu	Ser	Phe	Met	Leu	Ala	Glu	Leu	Phe	Ser	Leu
		260					265						270		
Ser	Gly	Ile	Ile	Thr	Val	Phe	Phe	Cys	Gly	Val	Leu	Met	Ser	His	Val
		275				280						285			
Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Ile	Thr	Ser	Arg	His	Val
		290				295					300				
Phe	Ala	Met	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Leu	Phe	Leu	Tyr	Val
305					310					315					320
Gly	Thr	Asp	Ala	Leu	Asp	Phe	Thr	Lys	Trp	Lys	Thr	Ser	Ser	Leu	Ser
			325						330					335	
Phe	Gly	Lys	Ser	Leu	Gly	Val	Ser	Ser	Val	Leu	Leu	Gly	Leu	Val	Leu

Phe	Asn	Ala	Val	Gln	Lys	Ile	Gln	Phe	Thr	His	Ile	Asn	Ala	Trp	Thr		
	195						200					205					
Ala	Leu	Gln	Leu	Ile	Gly	Asn	Phe	Leu	Tyr	Leu	Phe	Ser	Thr	Ser	Thr		
	210					215					220						
Leu	Leu	Gly	Ile	Gly	Thr	Gly	Leu	Ile	Thr	Ala	Phe	Val	Leu	Lys	Lys		
225					230					235					240		
Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Thr	Arg	Glu	Leu	Ala	Ile	Met	Ile		
			245						250					255			
Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu	Phe	Ser	Leu	Ser		
		260						265					270				
Gly	Leu	Leu	Thr	Val	Phe	Phe	Cys	Gly	Val	Leu	Met	Ser	His	Val	Thr		
	275						280					285					
Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Thr	Thr	Ser	Arg	His	Val	Phe		
	290					295					300						
Ala	Thr	Leu	Ser	Phe	Ile	Ser	Glu	Thr	Phe	Ile	Phe	Leu	Tyr	Val	Gly		
305					310					315					320		
Met	Asp	Ala	Leu	Asp	Phe	Glu	Lys	Trp	Lys	Thr	Ser	Ser	Leu	Ser	Phe		
			325						330					335			
Gly	Gly	Thr	Leu	Gly	Val	Ser	Gly	Val	Leu	Met	Gly	Leu	Val	Met	Leu		
		340						345					350				
Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser	Asn	Leu	Ala		
	355						360					365					
Lys	Lys	His	Gln	Ser	Glu	Lys	Ile	Ser	Phe	Arg	Met	Gln	Val	Val	Ile		
	370					375					380						
Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala	Leu	Ala	Leu		
385					390					395					400		
Asn	Lys	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	His	Gly	Asn	Ala	Ile		
			405						410					415			
Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser	Thr	Met	Val	Phe		
		420						425					430				
Gly	Met	Ile	Thr	Lys	Pro	Leu	Ile	Arg	Leu	Leu	Leu	Pro	Ala	Ser	Gly		
	435						440					445					
His	Pro	Arg	Glu	Leu	Ser	Glu	Pro	Ser	Ser	Pro	Lys	Ser	Phe	His	Ser		
	450					455				460							
Pro	Leu	Leu	Thr	Ser	Gln	Gln	Gly	Ser	Asp	Leu	Glu	Ser	Thr	Thr	Asn		
465					470					475					480		
Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Gly	Leu	Leu	Thr	Lys	Pro	Thr	His		
			485						490					495			
Thr	Val	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Leu	Met	Arg	Pro		
		500						505					510				
Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro	Thr		
	515						520					525					
Glu	Arg	Asn	Pro	Pro	Asp	Leu	Ser	Lys	Ala								
	530					535											

<210> 32
 <211> 545
 <212> PRT
 <213> Zea mays

<400> 32
 Met Ser Met Gly Tyr Gln Val Val Ala Ala Gln Leu Lys Val Ala Ser
 1 5 10 15
 Ser Ala Asp His Ala Ser Val Val Ile Thr Leu Phe Val Ala Leu
 20 25 30
 Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp

Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Ala Phe Met Arg
500 505 510
Pro Met Phe Gly Gly Arg Gly Phe Val Pro Val Val Pro Gly Ser Pro
515 520 525
Ile Glu Arg Ser Val Pro Gln Trp Ser Glu Glu Ala His Asn Lys Glu
530 535 540
Pro
545

<210> 33
<211> 541
<212> PRT
<213> Zea mays

<400> 33
Met Gly Leu Gly Val Val Ala Glu Leu Val Arg Leu Gly Val Leu Ser
1 5 10 15
Ser Thr Ser Asp His Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala
20 25 30
Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Asn Arg
35 40 45
Trp Val Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly
50 55 60
Val Val Ile Leu Leu Thr Thr Lys Gly Lys Ser Ser His Ile Leu Val
65 70 75 80
Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
85 90 95
Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met
100 105 110
Thr Ile Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr
115 120 125
Ile Ser Leu Gly Ala Leu Gly Leu Ile Ser Arg Leu Asn Ile Gly Ala
130 135 140
Leu Glu Leu Gly Asp Tyr Leu Ala Leu Gly Ala Ile Phe Ser Ala Thr
145 150 155 160
Asp Ser Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Phe
165 170 175
Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser
180 185 190
Val Val Val Phe Asn Ala Leu Gln Asn Phe Asp Ile Thr His Ile Asp
195 200 205
Ala Glu Val Val Phe His Leu Leu Gly Asn Phe Phe Tyr Leu Phe Leu
210 215 220
Leu Ser Thr Val Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Leu Val
225 230 235 240
Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala
245 250 255
Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe
260 265 270
Ala Leu Ser Gly Ile Leu Thr Val Phe Phe Gly Cys Ile Val Met Ser
275 280 285
His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys
290 295 300
His Ala Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Leu Phe Leu
305 310 315 320
Tyr Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser

				325					330					335			
Asp	Thr	Pro	Gly	Lys	Ser	Leu	Ala	Ile	Ser	Ser	Ile	Leu	Met	Gly	Leu		
			340					345					350				
Val	Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser		
		355					360					365					
Asn	Leu	Ala	Lys	Lys	Thr	Glu	His	Glu	Lys	Ile	Ser	Trp	Lys	Gln	Gln		
	370					375					380						
Val	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala		
385					390					395					400		
Leu	Ala	Tyr	Lys	Lys	Phe	Thr	Arg	Ala	Gly	His	Thr	Gln	Val	Arg	Gly		
			405					410						415			
Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Ile	Val	Val	Leu	Phe	Ser	Thr		
		420						425					430				
Met	Val	Phe	Gly	Leu	Leu	Thr	Lys	Pro	Leu	Ile	Asn	Leu	Leu	Ile	Pro		
		435					440					445					
His	Arg	Asn	Ala	Thr	Ser	Met	Leu	Ser	Asp	Asp	Ser	Ser	Pro	Lys	Ser		
	450					455					460						
Leu	His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Glu		
465				470					475						480		
Pro	Thr	Asn	Ile	Pro	Arg	Pro	Ser	Ser	Ile	Arg	Gly	Glu	Phe	Leu	Thr		
			485					490						495			
Met	Thr	Arg	Thr	Val	His	Arg	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Phe		
		500					505					510					
Met	Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly		
	515					520					525						
Ser	Pro	Thr	Glu	Arg	Asn	Pro	Pro	Asp	Leu	Ser	Lys	Ala					
	530					535					540						

<210> 34
 <211> 543
 <212> PRT
 <213> Gossypium hirsutum

<400> 34

Met	Val	Ala	Pro	Gln	Leu	Ala	Ala	Val	Phe	Thr	Lys	Leu	Gln	Thr	Leu		
1				5				10					15				
Ser	Thr	Ser	Asp	His	Ala	Ser	Val	Val	Ser	Met	Asn	Ile	Phe	Val	Ala		
		20					25					30					
Leu	Leu	Cys	Ala	Cys	Ile	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg		
	35					40						45					
Trp	Met	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Val	Phe	Thr	Gly		
	50				55						60						
Val	Ile	Ile	Leu	Leu	Thr	Ser	Gly	Gly	Lys	Ser	Ser	His	Leu	Leu	Val		
65				70					75						80		
Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe		
			85				90						95				
Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ile		
	100						105					110					
Thr	Ile	Met	Leu	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Cys	Thr	Ile		
	115					120						125					
Ile	Ser	Leu	Gly	Val	Ile	Asn	Phe	Phe	Lys	Glu	Met	Asp	Ile	Gly	Ser		
	130				135						140						
Leu	Asp	Ile	Gly	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr		
145				150					155						160		
Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu		
			165					170						175			

Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser
			180					185					190		
Val	Val	Leu	Phe	Asn	Ala	Ile	Gln	Ser	Phe	Asp	Leu	Val	Asn	Thr	Ser
		195					200					205			
Pro	Arg	Ile	Leu	Leu	Glu	Phe	Ile	Gly	Ser	Phe	Leu	Tyr	Leu	Phe	Leu
	210					215					220				
Ala	Ser	Thr	Met	Leu	Gly	Val	Ile	Val	Gly	Leu	Val	Ser	Ala	Tyr	Ile
225					230					235					240
Ile	Lys	Lys	Leu	Tyr	Phe	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Phe	Ala
				245					250					255	
Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Ile	Met	Ala	Glu	Leu	Phe
			260					265					270		
Tyr	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met	Ser
	275						280					285			
His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr	Lys
	290					295					300				
His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Val	Ala	Glu	Thr	Phe	Leu	Phe	Leu
305					310					315					320
Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Met	Glu	Lys	Trp	Arg	Phe	Val	Ser
				325					330					335	
Asp	Ser	Pro	Gly	Thr	Ser	Val	Ala	Val	Ser	Ala	Val	Leu	Met	Gly	Leu
			340					345					350		
Val	Met	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu	Ser
		355					360					365			
Asn	Leu	Ala	Lys	Lys	Ser	Thr	Ser	Glu	Lys	Ile	Ser	Phe	Arg	Glu	Gln
	370					375					380				
Ile	Ile	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Met	Ala
385					390					395					400
Leu	Ala	Tyr	Asn	Gln	Phe	Thr	Arg	Gly	Gly	His	Thr	Gln	Leu	Arg	Gly
			405					410					415		
Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Ile	Val	Leu	Phe	Ser	Thr
			420					425					430		
Val	Val	Phe	Gly	Leu	Met	Thr	Lys	Pro	Leu	Ile	Arg	Phe	Leu	Leu	Pro
		435					440					445			
His	Pro	Lys	Pro	Thr	Ala	Ser	Met	Leu	Ser	Asp	Gln	Ser	Thr	Pro	Lys
	450					455					460				
Ser	Met	Glu	Ala	Pro	Phe	Leu	Gly	Ser	Gly	Gln	Asp	Ser	Phe	Asp	Asp
465					470					475					480
Ser	Leu	Ile	Gly	Val	His	Arg	Pro	Asn	Ser	Ile	Arg	Ala	Leu	Leu	Thr
			485					490						495	
Thr	Pro	Ala	His	Thr	Val	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asn	Ala
			500					505					510		
Phe	Met	Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro
		515					520					525			
Gly	Ser	Pro	Thr	Glu	Arg	Ser	Glu	Pro	Asn	Leu	Pro	Gln	Trp	Gln	
	530					535					540				

<210> 35

<211> 557

<212> PRT

<213> Suaeda maritima

<400> 35

Met Trp Ser Gln Leu Ser Ser Phe Phe Ala Ser Lys Met Asp Met Val

1

5

10

15

Ser Thr Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala

Asp	Ser	Glu	Ala	Asp	Leu	Gly	Asn	Asp	Asp	Glu	Glu	Ala	Tyr	Pro	Arg
				485					490					495	
Gly	Thr	Ile	Ala	Arg	Pro	Thr	Ser	Leu	Arg	Met	Leu	Leu	Asn	Ala	Pro
			500					505					510		
Thr	His	Thr	Val	His	His	Tyr	Trp	Arg	Arg	Phe	Asp	Asp	Tyr	Phe	Met
		515					520					525			
Arg	Pro	Val	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser
	530					535					540				
Pro	Thr	Glu	Gln	Ser	Thr	Thr	Asn	Leu	Ser	Gln	Arg	Thr			
545					550					555					

<210> 36
 <211> 538
 <212> PRT
 <213> Hordeum vulgare

<400> 36

Met	Ala	Phe	Glu	Val	Val	Ala	Ala	Gln	Leu	Ala	Arg	Leu	Ser	Asp	Ala
1				5				10					15		
Leu	Ala	Thr	Ser	Asp	His	Ala	Ser	Val	Val	Ser	Ile	Asn	Leu	Phe	Val
			20					25				30			
Ala	Leu	Leu	Cys	Ala	Cys	Ile	Val	Leu	Gly	His	Leu	Leu	Glu	Glu	Asn
		35					40					45			
Arg	Trp	Leu	Asn	Glu	Ser	Ile	Thr	Ala	Leu	Ile	Ile	Gly	Leu	Cys	Thr
	50					55					60				
Gly	Val	Val	Ile	Leu	Met	Thr	Thr	Lys	Gly	Lys	Ser	Ser	His	Val	Leu
65					70				75						80
Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile
				85					90					95	
Phe	Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe
		100						105					110		
Met	Thr	Ile	Thr	Leu	Phe	Gly	Ala	Val	Gly	Thr	Met	Ile	Ser	Phe	Phe
		115					120					125			
Thr	Ile	Ser	Leu	Ala	Ala	Ile	Ala	Ile	Phe	Ser	Lys	Met	Asn	Ile	Gly
	130					135					140				
Thr	Leu	Asp	Val	Ser	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ser	Ala
145					150					155					160
Thr	Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro
			165						170					175	
Phe	Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr
		180					185						190		
Ser	Val	Val	Leu	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Pro	Asn	Gln	Ile
		195					200					205			
Asp	Ala	Ile	Val	Ile	Leu	Lys	Phe	Leu	Gly	Asn	Phe	Cys	Tyr	Leu	Phe
	210					215					220				
Val	Ser	Ser	Thr	Phe	Leu	Gly	Val	Phe	Ser	Gly	Leu	Leu	Ser	Ala	Tyr
225					230					235					240
Ile	Ile	Lys	Lys	Leu	Tyr	Ile	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val
			245					250						255	
Ala	Leu	Met	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu
		260						265					270		
Leu	Asp	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met
		275					280					285			
Ser	His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr
	290					295					300				
Lys	His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Leu	Phe

305					310					315				320	
Leu	Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Ala
				325					330					335	
Ser	Asp	Ser	Pro	Gly	Lys	Ser	Ile	Gly	Ile	Ser	Ser	Ile	Leu	Leu	Gly
			340					345					350		
Leu	Val	Leu	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu
		355				360					365				
Ser	Asn	Leu	Thr	Lys	Lys	Thr	Glu	Leu	Glu	Lys	Ile	Ser	Trp	Arg	Gln
	370					375					380				
Gln	Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile
385					390					395					400
Ala	Leu	Ala	Tyr	Asn	Lys	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	His
			405					410					415		
Gly	Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser
		420						425				430			
Thr	Met	Leu	Phe	Gly	Ile	Leu	Thr	Lys	Pro	Leu	Ile	Arg	Phe	Leu	Leu
	435					440					445				
Pro	Ala	Ser	Ser	Asn	Gly	Asp	Pro	Ser	Glu	Pro	Ser	Ser	Pro	Lys	Ser
	450				455					460					
Leu	His	Ser	Pro	Leu	Leu	Thr	Ser	Met	Leu	Gly	Ser	Asp	Met	Glu	Ala
465					470					475					480
Pro	Leu	Pro	Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Met	Leu	Ile	Thr	Lys
			485					490					495		
Pro	Thr	His	Thr	Ile	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Leu
		500						505					510		
Met	Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Tyr	Ser	Pro	Gly
	515					520						525			
Ser	Pro	Thr	Asp	Pro	Asn	Val	Ile	Val	Ala						
	530				535										

<210> 37
 <211> 540
 <212> PRT
 <213> Hordeum brevisubulatum

<400> 37

Met	Gly	Trp	Gly	Leu	Gly	Asp	Pro	Pro	Ala	Asp	Tyr	Gly	Ser	Ile	Met
1				5					10					15	
Ala	Val	Gly	Leu	Phe	Val	Ala	Leu	Met	Cys	Ile	Cys	Ile	Ile	Val	Gly
		20					25					30			
His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Met	Asn	Glu	Ser	Thr	Thr	Ala	Leu
	35					40					45				
Leu	Leu	Gly	Leu	Gly	Ala	Gly	Thr	Val	Ile	Leu	Phe	Ala	Ser	Ser	Gly
	50				55					60					
Lys	Asn	Ser	Arg	Leu	Met	Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr
65				70					75					80	
Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Lys
			85					90					95		
Gln	Phe	Phe	Arg	Asn	Phe	Met	Thr	Ile	Thr	Leu	Phe	Ala	Val	Val	Gly
		100					105					110			
Thr	Leu	Ile	Ser	Phe	Ser	Ile	Ile	Ser	Leu	Gly	Ala	Met	Gly	Leu	Ile
	115					120					125				
Ser	Arg	Leu	Asn	Ile	Gly	Ala	Leu	Glu	Leu	Gly	Asp	Tyr	Leu	Ala	Leu
	130				135					140					
Gly	Ala	Ile	Phe	Ser	Ala	Thr	Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu
145				150					155						160

1	5	10	15
Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu			
20	25	30	
Leu Cys Gly Cys Ile Val Phe Gly His Leu Leu Glu Gly Asn Arg Trp			
35	40	45	
Val Asn Glu Ser Thr Thr Ala Ile Val Leu Gly Leu Ile Thr Gly Gly			
50	55	60	
Val Ile Leu Leu Cys Thr Lys Gly Val Asn Ser Arg Ile Leu Ile Phe			
65	70	75	80
Ser Glu Asp Ile Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn			
85	90	95	
Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ala Thr			
100	105	110	
Ile Ile Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Phe Val Ile Ile			
115	120	125	
Thr Leu Gly Ala Met Gly Leu Phe Arg Lys Leu Asp Val Gly Pro Leu			
130	135	140	
Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp			
145	150	155	160
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Gln Ala Pro Leu Leu			
165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val			
180	185	190	
Val Leu Phe Asn Ala Ile Gln Asn Ile Asp Leu Asn His Phe Asp Val			
195	200	205	
Leu Val Leu Leu Gln Leu Ile Gly Lys Phe Leu Tyr Leu Phe Leu Thr			
210	215	220	
Ser Thr Val Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile			
225	230	235	240
Lys Lys Leu Cys Phe Ala Arg His Ser Thr Asp Arg Glu Val Ala Ile			
245	250	255	
Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ser Met Leu Leu Asp			
260	265	270	
Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His			
275	280	285	
Tyr Thr Arg His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His			
290	295	300	
Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Leu Phe Leu Tyr			
305	310	315	320
Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Lys Leu Ala Ser Ser			
325	330	335	
Ser Pro Lys Lys Pro Ile Ala Leu Ser Ala Val Ile Leu Gly Leu Val			
340	345	350	
Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Tyr Leu Ser Asn			
355	360	365	
Leu Ser Lys Lys Glu Ser His Pro Lys Ile Ser Phe Asn Gln Gln Val			
370	375	380	
Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu			
385	390	395	400
Ala Tyr Asn Lys Tyr Thr Thr Ser Gly His Thr Ala Val Arg Val Asn			
405	410	415	
Ala Val Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr Met			
420	425	430	
Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Val Pro Pro			
435	440	445	
Arg Pro Gly Thr Ala Ala Asp Ile Ser Ser Gln Ser Phe Leu Asp Pro			
450	455	460	

Leu	Thr	Ala	Ser	Leu	Leu	Gly	Ser	Asp	Phe	Asp	Val	Gly	Gln	Leu	Thr
465					470					475					480
Pro	Gln	Thr	Asn	Leu	Gln	Tyr	Leu	Leu	Thr	Met	Pro	Ser	Arg	Ser	Val
				485					490					495	
His	Arg	Val	Trp	Arg	Lys	Phe	Asp	Asp	Lys	Phe	Met	Arg	Pro	Met	Phe
			500					505					510		
Gly	Gly	Arg	Gly	Phe	Val	Pro	Phe	Val	Pro	Gly	Ser	Pro	Ile	Glu	Arg
		515					520					525			
Ser	Val	His	Gly	Pro	Gly	Leu	Leu	Gly	Thr	Val	Thr	Glu	Ala	Glu	Asn
	530					535					540				
Arg	Ser														
545															